FY2013

FORT BELVOIR

Army Defense Environmental Restoration Program

Installation Action Plan

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Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multiyear cleanup program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern (AOC), and proposes a comprehensive, installation-wide approach, along with the costs and schedules associated with conducting investigations and taking the necessary remedial actions (RA).

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), Fort Belvoir (FTBL), the Installation Management Command (IMCOM), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and tentative budgets for all major Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

Acronyms

AA	Anti-Aircraft
AC	Administrative Closure
AEDB-CC	Army Environmental Database - Compliance-related Cleanup
AEDB-R	Army Environmental Database - Restoration
AOC	Area of Concern
AOPC	Area of Potential Concern
AP	Antipersonnel
AS	Air Sparging
AST	Aboveground Storage Tank
Bldg	Building
BRAC	Base Realignment and Closure
BTAG	Biological Technical Assistance Group
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
CC	Compliance-related Cleanup
CDC	Child Development Center
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CLIN	Contract Line Item Number
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMS	Corrective Measures Study
COC	Contaminants of Concern
CR	Compliance Restoration
CS	Confirmatory Sampling
CTC	Cost to Complete
CTT	Closed, Transferring, Transferred
DD	Decision Document
DDT	Dichloro-diphenyl-trichloroethane
DERP	Defense Environmental Restoration Program
DES	Design
DMM	Discarded Military Munitions
DoD	Department of Defense
DPDO	Defense Property Disposal Office
DPE	Dual-Phase Extraction
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
DRO	Diesel Range Organics
EBS	Environmental Baseline Survey
EE/CA	Engineering Evaluation and Cost Analysis
EFR	Enhanced Fluid Recovery
EIP	Environmental Investigation Plan
EIS	Environmental Impact Statement
ENRD	Environmental and Natural Resources Division
EPA	United States Environmental Protection Agency
EPG	Engineer Proving Ground

Acronyms

ER	Emergency Removal
ER,A	Environmental Restoration, Army
ERTC	Engineer Replacement Training Center
FATTS	Former Aboveground Test Tank Site
FBNA	Fort Belvoir North Area, formerly Engineer Proving Ground
FRA	Final Remedial Action
FS	Feasibility Study
ft	feet
FTBL	Fort Belvoir
FY	Fiscal Year
GIS	Geographic Information System
GRO	Gasoline Range Organics
GSA	General Support Artillery
GW	Groundwater
HE	High Explosive
HEC	Humphrey Engineer Center
HMIS	Hazardous Materials Inform System
HRR	Historical Records Review
HTRW	Hazardous, Toxic and Radioactive Waste
HW	Hazardous Waste
IAP	Installation Action Plan
IM	Installation Management
IMCOM	Installation Management Command
IMP(C)	Implementation (Construction)
IMP(O)	Implementation (Operations)
INV	Investigation
IR	Installation Restoration
IRA	Interim Remedial Action
IRP	Installation Restoration Program
ISC	Initial Site Characterization
ISR	Investigation Summary Report
JP-4	Jet Propellant Number 4
K	Thousand
kg	kilogram
LEED	Leadership in Energy and Environmental Design
LFG	Landfill Gas
LOD	Limit of Detection
LPH	Liquid Petroleum Hydrocarbons
LTM	Long-Term Management
LUC	Land Use Control
LUCIP	Land Use Control Implementation Plan
MAMMS	Multiple Award Military Munitions Services
MC	Munitions Constituents
MCL	Maximum Contaminant Level
MD	Munitions Debris

Acronyms

MEC	Munitions and Explosives of Concern
MFR	Memorandum for Record
mg	milligram
mg/kg	milligrams per kilogram
mg/L	milligram per liter
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MP	Main Post
MR	Munitions Response
MRA	Munitions Response Area
MRS	Munitions Response Site
MW	Monitoring Well
NFA	No Further Action
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
O&M	Operations and Maintenance
ODUSD (I&E)	Office of the Deputy Under Secretary of Defense for Installations and Environment
OE	Ordnance and Explosives
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbon
PBA	Performance-Based Acquisition
PBC	Performance-Based Contract
PC	Pollution Complaint
PCB	Polychlorinated Biphenyl
PCC	Post-Closure Care
PCE	Tetrachloroethylene
PHC	Petroleum Hydrocarbons
POL	Petroleum, Oil and Lubricants
PP	Proposed Plan
ppb	parts per billion
ppm	parts per million
PRG	Preliminary Remediation Goals
PSA	Petroleum Storage Area
QTR	Quarter
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operation)
RAB	Restoration Advisory Board
RAC	Risk Assessment Code
RBC	Risk Based Concentrations
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RDX	Cyclotrimethylenetrinitramine
RFA	RCRA Facility Assessment

Acronyms

RFI	RCRA Facility Investigation
RI	Remedial Investigation
RI/FS	Remedial Investigation / Feasibility Study
RIP	Remedy-in-Place
ROD	Record of Decision
ROTC	Reserve Officers Training Corps
ROW	Right-of-Way
RRSE	Relative Risk Site Evaluation
RV	Recreational Vehicle
SCR	Site Characterization Report
SDZ	Surface Danger Zone
SI	Site Inspection
SOW	Statement of Work
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TAL	Target Analyte List
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TCE	Trichloroethylene
TD	Transferred
TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee
UAO	Unilateral Administrative Order
ug/L	microgram per liter
US EPA	United States Environmental Protection Agency
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USAEHA	United States Army Environmental Hygiene Agency
USATHAMA	US Army Toxic and Hazardous Materials Agency (currently called USAEC)
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VDEQ	Virginia Department of Environmental Quality
VDOT	Virginia Department of Transportation
VOC	Volatile Organic Compounds
VSI	Visual Site Inspection
WWI	World War I
WWII	World War II
XRF	X-Ray Flourescence

Acronym Translation Table

CERCLA		RCRA
Preliminary Assessment(PA)	=	RCRA Facility Assessment(RFA)
Site Inspection(SI)	=	Confirmation Sampling(CS)
Remedial Investigation/Feasibility Study(RI/FS)	=	RCRA Facility Investigation/Corrective Measures Study(RFI/CMS)
Remedial Design(RD)	=	Design(DES)
Remedial Action (Construction)(RA(C))	=	Corrective Measures Implementation (Construction)(CMI(C))
Remedial Action (Operation)(RA(O))	=	Corrective Measures Implementation (Operation)(CMI(O))
Long Term Management(LTM)	=	Long Term Management(LTM)
Interim Remedial Action(IRA)	=	Interim Measure(IM)

CERCLA		RCRA Underground Storage Tank (UST) Site Phase Terms
Preliminary Assessment(PA)	=	Initial Site Characterization(ISC)
Remedial Investigation(RI)	=	Investigation(INV)
Feasibility Study(FS)	=	Corrective Action Plan(CAP)
Remedial Design(RD)	=	Design(DES)
Remedial Action (Construction)(RA(C))	=	Implementation (Construction)(IMP(C))
Remedial Action (Operation)(RA(O))	=	Implementation (Operations)(IMP(O))
Long Term Management(LTM)	=	Long Term Management(LTM)
Interim Remedial Action(IRA)	=	Interim Remedial Action(IRA)

Installation Information

Installation Locale

Installation Size (Acreage): 9094
City: Washington, D.C.
County: Fairfax
State: Virginia
Other Locale Information

Fort Belvoir (FTBL) is located in southeastern Fairfax County, Virginia, approximately 18 miles southwest of Washington, DC and 95 miles north of Richmond, Virginia. The installation's major landholdings are within two separate areas: the 7,678-acre main post and the 807-acre FTBL North Area (FBNA), formerly referred to as Engineer Proving Ground or EPG. Together with the 581-acre Humphreys Engineer Center (HEC) and the 28-acre Rivanna Station, FTBL has management responsibility for a total of 9,094 acres.

Installation Mission

FTBL's mission is to:
- operate and maintain our installations,
- provide quality installation support and services to our customers, and
- execute mobilization requirements, military operations, and contingency/force protection missions.

Lead Organization

IMCOM

Lead Executing Agencies for Installation

US Army Corps of Engineers (USACE)- Baltimore District

Mission and Installation Contracting Command-Fort Sam Houston

Regulator Participation

Federal	US Environmental Protection Agency (US EPA), Region 3
State	Commonweath of Virginia Department of Environmental Quality (VDEQ)

National Priorities List (NPL) Status

FORT BELVOIR is not on the NPL

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status

The community has expressed no sufficient, sustained interest in a RAB.

Installation Information

Installation Program Summaries

IRP

Primary Contaminants of Concern: Explosives, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Other (Vapor), Sediment, Soil

MMRP

Primary Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC), Polycyclic Aromatic Hydrocarbons (PAH)

Affected Media of Concern: Groundwater, Soil

CR

Primary Contaminants of Concern: Metals, Pesticides, Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Sediment, Soil, Surface Water

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	201111	201211	2013

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
SWMU M-27	FTBL-69
SWMU M26 and FATTS	FTBL-68

Results The remedy at FTBL-68 and 69 are currently protective because no evidence of exposure exists. However, groundwater monitoring needs to be resumed in order to ensure the remedy is protective in the long-term.

Actions GW Monitoring proposed in October 2007 GW Monitoring Plan for both FTBL-68 and 69 is not resumed. Evaluate if FTBL-68 can be administratively closed out. Analyte specific performance standards need to derived for several contaminants.

Plans Derive analyte specific performance standards for several contaminants by Dec 2012. Resume GW monitoring by December 2012.

Recommendations and Implementation Plans:

Land Use Control (LUC) Summary

LUC Title: FTBL-68, M-26-FATTS LUC

Site(s): FTBL-68

ROD/DD Title: SWMU M26 and FATTS

Location of LUC

LUCs prohibiting groundwater usage. Fairfax County Parkway completed in June 2010.

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction - Prohibit, or otherwise manage excavation below a specified depth, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Hazardous substance easement, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 200610

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: PETROLEUM HYDROCARBON

Additional Information

N/A

LUC Title: FTBL-69, SWMU M27

Site(s): FTBL-69

ROD/DD Title: SWMU M-27

Location of LUC

Fort Belvoir North Area, formerly EPG, USAG Fort Belvoir, Fairfax County

Land Use Restriction: Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation

Types of Engineering Controls: None

Types of Institutional Controls: Dig Permits, Hazardous substance easement, Notations in Master Plan, Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 200811

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200811

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: Unexploded Ordnance(UXO)

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

US Army Garrison Fort Belvoir is made up of the main post, FTBL North Area (FBNA), Rivanna Station, the Mark Center to the north in Alexandria, Virginia, and the Humphreys Engineer Center, which was transferred to US Army Corps of Engineers. Military activities began at FTBL in 1915, when the US Army Engineer School, located at Washington Barracks (now Fort McNair), began conducting summer training exercises on a 1,500-acre tract. After the outbreak of World War I (WWI), a temporary cantonment area named Camp A. A. Humphreys was constructed on the peninsula between Accotink Creek and Dogue Creek. Housing and training facilities were built to accommodate 20,000 enlisted soldiers and officers stationed at Camp A.A. Humphreys while they trained.

Training facilities included the Engineer Replacement and Training Camp, the Engineer Officers' Training Center, the Army Gas School, which provided gas and flamethrower operations training, and the School of Military Mining. Most training was conducted in the area south of US Route 1 between Accotink Bay and Dogue Creek, although parts of the installation west of Accotink Bay were used for rifle ranges.

In 1919, the Army Engineer School moved permanently from Washington Barracks, and the camp was renamed to Fort Humphreys in 1922. The Army Engineering School provided training in forestry, road and railroad construction, camouflage, mine warefare, surveying, pontoon bridge construction, photography, printing and cooking. The site also served as a summer training camp for the Reserve Officers Training Corps (ROTC). The ROTC cadets received training in bayonet fighting, target practice, military administration and law, first aid and sanitation, bridge construction, demolition, reconnaissance, and railroad construction.

In 1924, the Army Engineer Board, the forerunner to the Army Research, Development and Engineering Center, relocated to Fort Humphreys. The Army Engineer Board developed many innovations, including assault boats, portable steel bridges and mine detectors. During the 1920s, the Fort was heavily built up with most of the temporary WWI era building being replaced with more permanent structures; as wells as officers' and enlisted family quarters.

In 1935, Fort Humphreys was renamed Fort Belvoir. FTBL was heavily expanded in the early-1940s due to the outbreak of World War II (WWII). An additional area of 3,000 acres was acquired for a new Engineer Replacement Training Center (ERTC). The ERTC continued to train soldiers in reconnaissance, unit coordination, road and obstacle construction and demolition. Engineering specialists were trained in carpentry, drafting, surveying and operating construction machinery. Specialized courses were offered in operation of weapons such as tanks, flamethrowers and anti-aircraft weapons. The Davison Army Airfield was constructed in the western quadrant of North Post.

From WWII to the 1980s, the types of training offered reflected shifts in warfare technology. A close combat range was constructed and a Chemical/Biological/ Radiological School started. In the 1950s, the Engineer Research Laboratories developed and tested new techniques for electrical power generation, camouflage and deception, materiel and fuel handing methods, bridging, and mine detection. They experimented with portable copying machines, tropical fungicides, prefabricated buildings, and heavy earth moving equipment. The installation's nuclear plant, SM-1 (stationary medium power, first prototype), became operational in 1957 and was the nation's first national nuclear training facility for military personnel.

In 1988, the Army Engineer School relocated to Fort Leonard Wood, Missouri and control of FTBL was transferred from US Army Training and Doctrine Command to the US Army Military District of Washington. FTBL's mission changed from training soldiers to administrative and logistics support for the National Capital Region.

FBNA, formerly called Engineer Proving Ground or EPG, is an 840-acre parcel, about 1.5 miles north of Fort Belvoir, and was acquired in the early-1940s for use by the Army Research, Development, and Engineering Center. The principal mission of the FBNA was the testing of military engineering equipment, and land mine material testing.

Testing on the eastern portion of FBNA was primarily non-munitions-related and generally included: construction related training; fuels and fuel handling and storage equipment, mobile water purification equipment and waste and sewage structures, dynamometer courses, and fire suppression.

Research on the western portion of FBNA generally included training on the deployment, detection and neutralization of land mines, climatic effects on paints, tactical sensors and anti-mine systems and techniques, and the development and testing of anti-tank, anti-personnel, and sensory mines.

Cleanup Program Summary

Installation Historic Activity

Most research and testing activities ceased between the 1970s and 1980s when local housing areas began encroaching on FBNA.

FTBL currently provides essential administrative and basic operations support to its tenant organizations.

Due to its location, FTBL has been a receiving installation for many organizations under the several Base Realignment and Closure (BRAC) Act announcements. Organizations from all five services, as well as Department of Defense (DoD) organizations have transferred to FTBL DoD)Logistics Agency Headquarters Complex was relocated to FTBL, as well as the US Army Materiel Command.

Other organizations which have relocated to FTBL include:
- US Army Intelligence Security Command Headquarters
- US Army Management Staff College
- US Army Community and Family Support Center, and
- Defense Threat Reduction Agency

As a result of the most recent BRAC announcement in 2005, FTBL gained approximately 20,000 additional soldiers and civilians. Rivanna Station, in Charlottesville, VA and the Marks Center, in Alexandria, VA were both included under FTBL once construction of those facilities was completed. Additionally, both main post and FBNA underwent a major construction effort, starting in 2007, with new buildings, a new road network at FBNA, and the required infrastructure to support these facilities. The most recent BRAC construction was for the most part completed in 2011.

Installation Program Cleanup Progress

IRP

Prior Year Progress: Operation and maintenance of a dual-phase extraction system (DPE) and soil vapor extraction (SVE)/air sparging (AS) system at FTBL-51 continued.

Resumed groundwater monitoring at FTBL-68. Risk assessment for FTBL-66 was under USEPA review. USEPA approval received on risk assessment for FTBL-69 shows no unacceptable exposure risks.

Future Plan of Action: Continue to monitor groundwater at FTBL-68 until cleanup levels are achieved. Prepare an FS for FTBL-66 and select final remedy (assume it will be groundwater monitoring). Anticipating case closure of FTBL-51 in FY14. If achieved, decommissioning at FTBL-51 will include well and line abandonment and removal of remediation system. FTBL to work with the USEPA to closeout FTBL-69.

MMRP

Prior Year Progress: Remedial investigation (RI) for main post sites completed in December 2012. FS is planned for March 2013. Finalized FS and DD for MR sites FTBL-005-R-01 and FTBL-005-R-05. Submitted Draft Final EE/CA evaluating interim LUCs for sites under a non-time critical removal action in accordance with CERCLA finalized in FY13.

Future Plan of Action: Conduct FS for main post sites. FTBL anticipates LUCs as final remedy. Begin monitoring of LUCs at FTBL-005-R-01 and at FTBL-005-R-05, and begin groundwater monitoring at FTBL-005-R-05.

CR

Prior Year Progress: The DPE remediation systems at sites CCBLDG-1124 and 3161 continued to be effective. Operations of an AS/SVE system at CCBLDG-2209 continued. Main post work included negotiations with the USEPA for no further action (NFA) on previously investigated sites and administrative closure (AC) of 12 sites. Risk assessment waiting the USEPA review for CC-MPS2009.

Future Plan of Action: Anticipate case closure for sites CCBLDG-1124, 2209 and 3161 in FY14. If achieved, remediation systems at sites will be decommissioned. An FS is planned for CC-MPS2009, with LUCs and groundwater monitoring anticipated as final remedy. Work on main post 2010 PBA will continue. Main

post sites not included in 2010 PBA will be further evaluated. Continue negotiations with regulators for NFA or closure of 200+ solid waste management units (SWMUs) (both historic and based on recent investigations).

FORT BELVOIR

Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 53/49

Installation Site Types with Future and/or Underway Phases

1 Explosive Ordnance Disposal Area
(FTBL-69)
1 Fire/Crash Training Area
(FTBL-66)
1 Spill Site Area
(FTBL-68)
1 Underground Tank Farm
(FTBL-51)

Most Widespread Contaminants of Concern

Explosives, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Other (Vapor), Sediment, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTBL-66	Sites M-07/18 and AOPC-4	IRA	REMOVAL	1995
FTBL-62	PETROLEUM CONTAMINATION - BUILDING 1803	IRA	GROUND WATER TREATMENT	1997
FTBL-62	PETROLEUM CONTAMINATION - BUILDING 1803	FRA	AIR SPARGING	1997
FTBL-62	PETROLEUM CONTAMINATION - BUILDING 1803	FRA	SOIL VAPOR EXTRACTION	1997
FTBL-63	EPG SOLIDWASTE MANAGEMENT UNITS(28)	FRA	WASTE REMOVAL - SOILS	1999
FTBL-51	TANK FARM - BLDG 324, 325	FRA	GROUND WATER TREATMENT	2004
FTBL-51	TANK FARM - BLDG 324, 325	FRA	SOIL VAPOR EXTRACTION	2004
FTBL-51	TANK FARM - BLDG 324, 325	FRA	AIR SPARGING	2004
FTBL-68	M-26, Hydrocarbon Spill Area	IRA	REMOVAL	2006
FTBL-69	M-27, Waste Ordnance Pit at Range 1	IRA	REMOVAL	2007
FTBL-51	TANK FARM - BLDG 324, 325	FRA	CHEMICAL REDUCTION/OXIDATION	2008
FTBL-66	Sites M-07/18 and AOPC-4	IRA	REMOVAL	2008
FTBL-68	M-26, Hydrocarbon Spill Area	FRA	INSTITUTIONAL CONTROLS	2008
FTBL-68	M-26, Hydrocarbon Spill Area	FRA	NATURAL ATTENUATION	2008
FTBL-69	M-27, Waste Ordnance Pit at Range 1	FRA	NATURAL ATTENUATION	2009
FTBL-65	Septic Tank & Leach Field (B2075)	FRA	OTHER	2011
FTBL-69	M-27, Waste Ordnance Pit at Range 1	FRA	INSTITUTIONAL CONTROLS	2013

Duration of IRP

Date of IRP Inception: 198009

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201506/203710

Date of IRP completion including Long Term Management (LTM): 203709

IRP Contamination Assessment

Contamination Assessment Overview

FTBL has four active Installation Restoration sites. Site FTBL-51 consists of a former petroleum tank farm and a generator testing facility at Building (Bldg) 324, and was identified following closure activities and a site characterization study. In 1996, 10 underground storage tanks were removed, five of which were identified as leaking or potentially having leaked. A subsequent site assessment identified contaminated groundwater and a plume that discharges to surface water. In May 1999, a Corrective Action Plan (CAP) was completed. In November 1999 a three-zone SVE system and sparge points were installed in accordance with the CAP to address the source area and the surface water discharge area. The system was operational in December 1999.

In 2008, FTBL petitioned the VDEQ for case closure of the pump and treat portion of the system because there had been no free-phase product at the site in over a year. On March 4, 2008, the VDEQ approved this petition and the pump-and-treat portion of the Dual Phase Extraction (DPE) system was shut down.

As of 2013, FTBL-51 (Bldg 324) is in post-operational mode and will be so for one more year. No remediation is occurring at this site at this time, only monitoring and sampling and checking for contaminant rebound (or not).

In 2005, in response to the 2005 BRAC announcement, the USEPA issued a RCRA Section 3013 Unilateral Administrative Order (UAO) to Engineer Proving Ground [now called Fort Belvoir North Area (FBNA)], requiring the Army to investigate numerous potential releases of contamination. While the inspections officially began at that time, FTBL had already been conducting investigations at known releases of contamination due to planned Fairfax County Parkway construction. As a result, investigations at FTBL-68 and FTBL-69 were already underway when the UAO was issued.

DDs recommending groundwater monitoring and natural attenuation (MNA) at FTBL-68 and FTBL-69 were signed in 2006 and 2007, respectively. Groundwater MNA at each site was performed every two years, after which time FTBL submitted a natural attenuation evaluation report to the USEPA. Both sites were within the Fairfax County Parkway Extension right of way and groundwater wells were abandoned to allow for BRAC and Fairfax County Parkway construction. FTBL determined that groundwater MNA at FTBL-68 is effective; however, it is not effective at FTB -69. FTBL then conducted a risk assessment at FTBL-69, which showed no unacceptable risks at the site, and will recommend closure of the site to the USEPA.

Investigations at FTBL-66 were completed in 2008, but remedial activities were put on hold due to BRAC and Parkway construction. A risk assessment is currently under USEPA review for FTBL-66. Upon completion, an FS is planned for FY14.

Cleanup Exit Strategy

FTBL-51 (Bldg 324) will remain in post-operational mode for a final 12 months for FY14, assuming that no elevated contaminant or liquid petroleum hydrocarbon rebound has occurred. Once that has been completed, Fort Belvoir will petition the VDEQ for case closure at the site.

Groundwater monitoring at sites FTBL-68 will resume until remedial end points are met. FTBL will work with the USEPA for site closeout at FTBL-69. An FS is planned for FTBL-66.

IRP Previous Studies

	Title	Author	Date
1988			
	Phase II RCRA Facility Assessment (RFA) at US Army Garrison Fort Belvoir	AT Kearney	JAN-1988
1990			
	Environmental Baseline Study at Engineer Proving Grounds	USATHAMA	JAN-1990
	Environmental Baseline Study at EPG Volume I: Phase I, Scope Definition. and Phase II, Environmental Survey	USATHAMA	SEP-1990
	Environmental Baseline Study, EPG, Volume II to Phase III Sampling	USATHAMA	SEP-1990
1992			
	SWMU Study	CH2MHill	JAN-1992
	Solid Waste Management Unit Study Appendix D DRAFT RFA Report	AT Kearney	JUL-1992
1993			
	Environmental Impact Statement	USACE	MAR-1993
1994			
	Fort Belvoir Solid Waste management Units Vol 1	Department of the Army	JAN-1994
	Fort Belvoir Solid Waste management Units Vol 2	Department of the Army	JAN-1994
1995			
	Site Characterization Report of Building 1803 Area	Koester Environmental	FEB-1995
1997			
	Underground Storage Tank Activity Reports	Koester Environmental	AUG-1997
1998			
	Site Characterization Report	LAW Environmental	MAR-1998
1999			
	Corrective Action Plan Building 324	LAW Environmental	MAY-1999
2000			
	Site Characterization Report Addendum Building 324	LAW Environmental	JUN-2000
2001			
	Corrective Action Plan Addendum Building 324	LAW Environmental	JUN-2001
2002			
	Closure Plan Site M-27, Waste Ordnance Pits at Range 1 Engineer Proving Ground	Dewberry	APR-2002
2005			
	Addendum to the Investigation Summary Report SWMU M-27 at EPG	Dewberry	JAN-2005
	Groundwater Investigation Summary Report, SWMU M-27 at Engineer Proving Ground	Dewberry	MAR-2005
	Site Investigation Summary Hydrocarbon Spill Area SWMU-M-26	Dewberry	APR-2005
	SWMU M-26 Site Investigation Summary Report	Dewberry	MAY-2005
	Groundwater Investigation Summary, SWMU M-27 at Engineer Proving Ground	Dewberry	MAY-2005

IRP Previous Studies

	Title	Author	Date
2005			
	Groundwater Investigation Summary-SWMU M-27 at EPG	Dewberry	JUN-2005
	Phase III Soil and Groundwater Investigation Report, SWMU-M-26	Mactec	OCT-2005
	Stakeholder Draft: Historical Records Review, Fort Belvoir	Malcolm Pirnie	NOV-2005
2006			
	Groundwater Investigation Summary Report, Phase III, SWMU-M-27	TetraTech, Inc.	JAN-2006
	Environmental Investigation and Removal Action: EPG, Fort Belvoir, Final Site Safety and Health Plan August 27, 2003; Addendum No 1	Conti	MAR-2006
	Environmental Investigation and Removal Action at SWMU-M-27, Part 1 of 2	Conti	MAR-2006
	Phase III Groundwater Investigation Summary Report	TetraTech, Inc.	APR-2006
	Environmental Investigation Plans-Areas of Potential Concern Volume 3	TetraTech, Inc.	DEC-2006
	Environmental Investigation Plans-SWMU-East Volume 1	TetraTech, Inc.	DEC-2006
	Environmental Investigation Plans-PSA Volume 4	TetraTech, Inc.	DEC-2006
	Environmental Investigation Plans-SWMU-West Volume 2	TetraTech, Inc.	DEC-2006
	Environmental Investigation Plans-PSA Volume 5	TetraTech, Inc.	DEC-2006
2007			
	Investigation Summary Report SWMU M41 at EPG	Tidewater	APR-2007
	Final Environmental Investigation Summary Report SWMU M-7/M-18	Tidewater/Mactec	MAY-2007
	Final Environmental Investigation Summary Report AOPC-04	Mactec	MAY-2007
	Final Environmental Investigation Summary Report PSA-2000	Tidewater	MAY-2007
	Phase 2 Environmental Investigation Action Plan IHL	Tetra Tech	JUN-2007
	Phase 2 Environmental Investigation Plan PSA-2000 at EPG	Tetra Tech	JUN-2007
	Phase 2 Environmental Investigation Plan M41 EPG	Tetra Tech	JUN-2007
	Phase 2 Environmental Investigation Plan Fire Training Area EPG	Tetra Tech	JUN-2007
	Phase III Environmental Investigation Plan, SWMU M-7/M-18	Tetra Tech	SEP-2007
	Phase 2 Environmental Investigation Report PSA-2000 at EPG	Tetra Tech	DEC-2007
	Phase III Investigation Summary Report FTA	Tetra Tech	DEC-2007
2008			
	Phase 2 Environmental Investigation Plan M-41 EPG	Tetra Tech	JAN-2008
	Final Environmental Investigation Summary Report PSA-2064	Tidewater	MAR-2008
2009			
	Final Feasibility Study, SWMU M-41	Hydrogeologic, Inc.	APR-2009

IRP Previous Studies

	Title	Author	Date
2009			
	Final Remedial Action Work Plan, SWMU M-41	Hydrogeologic, Inc.	JUN-2009
	Proposed Plan, SMWU M-41	Hydrogeologic, Inc.	JUL-2009
	Final Removal Action Report, SWMU M-41	Hydrogeologic, Inc.	DEC-2009
2010			
	FTBL-51 / Bldg 324 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc. for Fort Belvoir	AUG-2010
2011			
	FTBL-51 / Bldg 324 - Annual Corrective Action Monitoring Report	AMEC Environment & Infrastructure, Inc., for Fort Belvoir	AUG-2011
2012			
	FTBL-51 / Bldg 324 - Annual Corrective Action Monitoring Report	AMEC Environment & Infrastructure, Inc., for Fort Belvoir	AUG-2012

FORT BELVOIR

Installation Restoration Program

Site Descriptions

Site ID: FTBL-51
Site Name: TANK FARM - BLDG 324, 325

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Other (Vapor), Soil, Surface Water

Phases	Start	End
ISC	199605	199606
INV	199704	199806
CAP	199810	199905
DES	199905	199906
IMP(C)	199906	200802
IMP(O)	199912	201310
LTM	201310	201409

RIP Date: 200802

RC Date: 201310

SITE DESCRIPTION

Bldg 324 is a military generator testing and research building located south of Beach Road at FTBL, Virginia. Leaking USTs were identified following closure activities and a site characterization study. In May and June 1996 10 USTs were removed from the former tank farm. The tanks contained gasoline, diesel, fuel oil, and jet propellant fuels (JP5, JP6, JP7 and JP8). Five of the USTs were identified as leaking. Approximately 2,200 cubic yards of petroleum contaminated soils were removed from the subject site during tank removal activities. The release was reported to the VDEQ and Pollution Complaint (PC) No. 1998-3593 was assigned. In April 1998 a site characterization report (SCR) was completed which identified contaminated groundwater and a PHC plume which reached surface water. The VDEQ mandated a CAP for the site.

The CAP was developed between October 1998 and May 1999 and was submitted to the VDEQ on May 18, 1999. It was approved by the VDEQ on May 26, 1999. CAP Tracking No.148 was assigned to the site. A three zone SVE system and AS points were installed in accordance with the CAP to address the source area and the surface water discharge area. In November 1999 the system was installed and start-up was initiated in December. An SCR Addendum was prepared in June 2001 to investigate potential additional source areas and delineate the plume on the northern and southern areas of the site. The relative risk site evaluation (RRSE) was revised in September 2002, (1A), incorporating the June 2002 data. A DPE system was constructed and started in April 2002 in accordance with approved CAP Addendum. The DPE system recovered 1,644 gallons of free-product from April 2002 through March 2008, when this portion of the system was shut-down (with VDEQ approval). The SVE system has recovered approximately 10.77 tons of cumulative mass of hydrocarbons between December 1999 and September 2012. The DPE system has removed, in vapor phase, approximately 18.04 tons cumulative mass of total petroleum hydrocarbons (TPH) between April 2002 and September 2012. No free-product has been gauged in any of the site wells since October 2006.

CLEANUP/EXIT STRATEGY

Anticipating case closure in FY14. If achieved, decommissioning at this site will include well and line abandonment and removal of remediation system.

Site ID: FTBL-66
Site Name: Sites M-07/18 and AOPC-4

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA	198806	198809
SI	200610	200703
RI/FS	200706	201506
IRA	199506	200710

RIP Date: N/A

RC Date: 201506

SITE DESCRIPTION

This site includes Site M-07, Inactive Fire Equipment Test Area, and Site M-18, Abandoned Underground POL Tanks identified by the USEPA Phase II RCRA Facility Assessment, prepared by A.T. Kearney in 1988. It was further discussed in the 1990 USATHAMA Phase I/II EBS. Site 7 was used as a fire equipment test area, where fuel was pumped into a large shallow tank partially filled with water and ignited. Once the fire was suppressed, the remaining water and product was drained into a nearby creek. Site 18 was identified as the fuel storage area for this testing facility. The report recommended additional sampling for both sites. The report recommended further sampling which resulted in the additional recommendation to delineate the soil contamination. A closure plan was developed in 1993, and was implemented in 1995, during which time the tanks were excavated. Soil samples collected at that time exhibited TPH concentrations above the VDEQ action levels (100 mg/kg).

In 2005, BRAC legislation identified FTBL as a gaining installation for approximately 20,000 civilians and service members; 8,500 of which were to be transferred to FBNA. A second project for the Fairfax County Parkway (Parkway) extension was planned concurrently with the BRAC construction. In response to the BRAC announcement, the USEPA issued a RCRA 3013 UAO in 2005 to Engineer Proving Ground, now referred to as FBNA, requiring the Army to investigate potential releases of hazardous substances. FTBL had begun investigation activities at this site in 2005. This site was heavily impacted by construction of an access control point, and a stream crossing of utilities and a bridge required by BRAC construction.

During the Phase II investigation for the above sites, AOPC-4 (carbon tetrachloride) was identified in groundwater approximately 100 ft south. Since there was no known source and the site was in proximity to the infrastructure of the former fire training area, AOPC-4 was combined with SWMUs M-07 and M-18 for management purposes.

In March 2008, the groundwater contamination was fully delineated; however, follow-on work was placed on hold until the 2005 BRAC related construction was completed. In 2011, FTBL submitted a risk assessment for review to the USEPA which indicated unacceptable risk to human health and the environment was present at this site. An FS is planned for FY14, pending risk assessment review. Additional investigation may be required to re-delineate this site due to impacts related to construction. AOPC-20 is located within the boundaries of site FTBL-66. Therefore, any costs associated with AOPC-20 will be captured under FTBL-66.

CLEANUP/EXIT STRATEGY

Feasibility studies will be funded in the first quarter of FY14. Groundwater monitoring and LUCs are anticipated as the final remedy.

Site ID: FTBL-68
Site Name: M-26, Hydrocarbon Spill Area

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA	198809	198909
SI	199001	199009
RI/FS	200111	200512
IRA	200604	200607
RA(C)	200610	200712
RA(O)	200801	203709

RIP Date: 200801

RC Date: 203710

SITE DESCRIPTION

This site was identified as Site 26, Hydrocarbon Spill Area, in the 1990 USATHAMA Phase I/II EBS. The site is the location of a petroleum release, which occurred in 1968, during which time 30,000 to 100,000 gallons of product were released and flowed into the adjacent stream and into Accotink Creek. The fuel was then ignited which destroyed numerous structures and caused several acres to burn. The report recommended further sampling which resulted in the additional recommendation to delineate the soil contamination. A closure plan was developed in 1993, and was implemented in 1995, when TPH concentrations above VDEQ action levels were noted. Additional investigation was performed in 2002 and 2005.

In 2005, BRAC legislation identified FTBL as a gaining installation for approximately 20,000 civilians and service members; 8,500 of which were to be transferred to FBNA. A second project for the Fairfax County Parkway (Parkway) extension was planned concurrently with the BRAC construction. In response to the BRAC announcement, the USEPA issued a RCRA Section 3013 UAO in 2005 to Engineer Proving Ground, now referred to as FBNA, requiring the Army in investigate potential releases of hazardous substances. Although FTBL had begun investigation activities at this site, it was cited as a potential release site in the UAO and was subsequently involved in the FTBL VSI for FBNA sites. This site is almost entirely within the Parkway right of way and subsequent VDOT easement.

TPH was detected in soil samples collected at M-26 up to 11,000 mg/kg, in addition to VOCs and SVOCs. Free-product was never found in any M-26 groundwater well. Benzene, toluene, ethylbenzene, and xylene were detected above their corresponding MCLs in groundwater wells. Naphthalene was detected in groundwater wells above its USEPA, Region III Tap Water risk based concentrations.

In winter 2005-06 the Army developed a remediation plan for SWMU M-26. In November 2006, the Decision Document was signed, committing the Army to remove contaminated soils and conduct groundwater monitoring and natural attenuation. In 2007, approximately 13,000 tons of soils were removed from the M-26 area. A long-term groundwater monitoring plan was subsequently developed, where quarterly groundwater MNA was planned for two years, after which time FTBL would perform an MNA evaluation to determine whether the remedy was effective.

While performing soil remediation at M-26, additional underground piping and petroleum contamination was identified to the south at the Former Aboveground Test Tank Site (FATTS) site. Excavation of FATTS was completed in spring 2007 and groundwater monitoring wells were installed and monitored under the SWMU M-26 MNA program.

Quarterly sampling was completed in December 2008. Groundwater wells were abandoned shortly after to facilitate BRAC and Parkway construction. The last two quarters of the groundwater sampling at M-26 indicated that the remedial goals were met and FTBL proposed no further action; however, the USEPA requested additional sampling to capture any potential seasonal fluctuation. One well at the FATTS site continued to exhibit groundwater contamination concentrations above cleanup levels and would require additional sampling.

BRAC and Parkway construction were completed in March 2011. Groundwater wells were reinstalled in fall 2011. In June

Site ID: FTBL-68
Site Name: M-26, Hydrocarbon Spill Area

2012,FTBL submitted a revised groundwater LTM-MNA plan to the USEPA for review. Upon review, the new remediation manager at the USEPA indicated that the well network may be extensive and that additional sampling at M-26 may not be required. Levels at FATTS had not met their remedial goals upon completion of the quarterly sampling.

Groundwater sampling at the FATTS site will resume in 2nd QTR FY13 under PBA contract No. 2, under AEDB-R Site PBA@MR Belvoir through 2014.

CLEANUP/EXIT STRATEGY

Continue groundwater MNA until remedial goals are achieved.

Site ID: FTBL-69
Site Name: M-27, Waste Ordnance Pit at Range 1

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Munitions constituents (MC)

Media of Concern: Groundwater

Phases	Start	End
PA	198809	198909
SI	200306	200311
RI/FS	200312	200606
IRA	200609	200703
RA(C)	200610	201309
RA(O)	200909	201310

RIP Date: 201309

RC Date: 201310

SITE DESCRIPTION

This site was identified as Site 27, Waste Ordnance Pit at Range 1, in the 1990 USATHAMA Phase I/II EBS, and is described as a 20 foot diameter, 6 foot deep pit, used in the mid- to late-1950s for about 10 years to demilitarize waste ordnance and explosives. The report assumed soil contamination based on historical use and recommended further investigation. A closure plan was developed in 1993, but was not implemented. A second closure plan was developed in 2002 and implemented in 2003.

In 2005, BRAC legislation identified FTBL as a gaining installation for approximately 20,000 civilians and service members; 8,500 of which were to be transferred to FBNA. A second project for the Fairfax County Parkway (Parkway) extension was planned concurrently with the BRAC construction. In response to the BRAC announcement, the USEPA issued a RCRA 3013 UAO in 2005 to Engineer Proving Ground, now referred to as FBNA, requiring the Army to investigate potential releases of hazardous substances. Although FTBL had begun closure activities of this site, it was cited as a potential release site in the UAO and was subsequently involved in the FTBL VSI for FBNA sites.

Between 2003 and 2005, FTBL performed surface and subsurface MEC investigation and clearance at Range 1, during which time several disposal pits were identified and excavated. Soil and groundwater investigations were conducted in 2005, in accordance with the RCRA UAO. Low level explosives were detected in groundwater above the corresponding RBCs. Two additional phases of groundwater investigations were performed to delineate the nature and extent of the contamination. The March 2006 soil investigation results indicated that soil contamination was not present at the site.

FTBL finalized a DD in May 2006 under CERCLA, which recommended groundwater MNA and LUCs to prohibit exposure to groundwater. The USEPA requested that the Army conduct eight quarters of groundwater sampling to determine whether explosives would naturally attenuate, after which the Army would conduct an MNA evaluation. The first two years of groundwater was completed in December 2008. The 2009 MNA evaluation determined that MNA of explosives was not effective. Additionally, the MNA evaluation indicated that the explosives plume was migrating beyond the LUC; however, it is still contained on Army property.

BRAC construction began in 2007 and Parkway construction began in 2008. Approximately 250 of 807 acres at FBNA were impacted by BRAC construction, which included a one million square foot facility, road network, and supporting infrastructure, and the completion of the Parkway.

A risk assessment was never prepared for this site due to the pending BRAC development. Therefore, the MNA evaluation recommended that FTBL prepare a risk assessment in accordance with the USEPA document Risk Assessment Guidance for Superfund and reevaluate possible and appropriate remedies in a FS. The risk assessment, which suggested that are no unacceptable risks to human health and the environment, was approved by the USEPA in July 2012. FTBL will submit a revised FS summarizing the site's history and anticipates site closure given there are no unacceptable risks present. A CERCLA five-year review for the site was completed in 2013.

Site ID: FTBL-69
Site Name: M-27, Waste Ordnance Pit at Range 1

CLEANUP/EXIT STRATEGY

FTBL anticipates that this site will be closed out in FY13.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTBL-01	CLOSED LANDFILL (REVEGETATED)	199010	FTBL was unable to determine the exact location and corresponding SWMU ID.
FTBL-02	INACTIVE LANDFILL(BORDERS ACCOTINK CREEK	199008	This site, known as SWMU A-12, was entered into the CC database August 2005 under Site ID CC-A12. The Phase I RFI was performed under CC database. The site was reopened in AEDB-R as CC-A12. A Phase II investigation has been funded under -R site CCPBA@Belvoir. Future costs will be programmed under CC-A12.
FTBL-04	BATTERY STORAGE AREA-BLDGS 324,1146	199008	This site includes SWMUs H-02 and H-03. H-02 was entered into the CC database as CC-H02. A Phase I investigation was performed and FTBL received formal NFA closure(EPA) for H-02. H-03 was not entered into the CC-database. FTBL is currently seeking NFA based on historical documentation for H-03.
FTBL-05	LABORATORY STORAGE AREA,#305,307,357	199008	This site includes SWMUs B-17 (Bldg 305), B-18 (Bldg 307), and B-19 (Bldg 357). FTBL is seeking administrative closure as there was no known release to the environment. These sites were not entered in the CC database.
FTBL-06	SEWAGE TREATMENT PLANT 1(INACTIVE)	201302	This site was closed in AEDB-R due to previous eligibility requirements and transferred to AEDB-CC. Additionally, it is unclear whether FTBL-06 encompassed the sewage treatment plant itself or the UST colocated with it. In timeframe of 2010, restrictions on ER,A funding was revised and CC-L45 was opened in AEDB-R to cover investigation activities of the Sewage Treatment Plant.
FTBL-07	FUEL STORAGE/AREA 300 BLDGS	199008	This site includes SWMUs L-14 and L-15. FTBL is seeking administrative closure for these sites. These sites were not entered in the CC database.
FTBL-08	OIL/WATER SEPARATOR (3)	199008	FTBL was unable to determine the exact location of this site and the corresponding SWMU ID.
FTBL-09	THOETE ROAD LANDFILL	199010	This landfill, designated SWMU A-02, is a closed landfill subject to Post Closure Care (PCC) under a permit issued by Virginia DEQ. This site was transferred to CC as CC-A02. Future groundwater monitoring requirements will be funded under the CC database.
FTBL-10	LEAKING TRANSFORMERS(3)(NEAR DAVISON AF)	198208	This site is known as SWMU L-04. FTBL is seeking formal administrative closure for this site. This site was never in the CC

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			database.
FTBL-11	FORMER GRENADE STG BUNKER	198208	It is unknown with certainty which site this is however, it may be SWMU M-22 located at Building 2095 (now 5095). This site was not entered in the CC database. FTBL has received NFA for this site.
FTBL-12	FIRE FIGHTING TRAINING/BURN AREA	198208	This site may potentially include the Davison Airfield Fire Training Area SWMUs K01-K05 or EPG's Fire Training Area SWMU M-07. M-07 was entered into the CC database under site ID CC-M07M18. M-07 was later transferred to -R as FTBL-66. FTBL is seeking formal NFA for K01-K05 based on historical documentation. These sites were not entered in the CC database.
FTBL-13	PESTICIDE MIXING ROOM-BLDG 1490	199010	This site, known as SWMU B-16, was formerly a pesticide mixing area and is now an active Part B Hazardous Waste Permitted Storage Facility. This site was not entered in the CC database. FTBL is seeking administrative closure for this site. It is an active storage area.
FTBL-14	HAZ WST STG BLDGS 317A,327C,362,362A,363	199010	This site most likely includes the hazardous waste storage areas at Bldg 363 (SWMUs B14, B15, B20, B21, & B22), Bldg 317A (SWMU B11), 327C (SWMU B12) & 362A (SWMU B13). None of the sites were entered in the CC database. FTBL is seeking regulator concurrence for closure of all these sites.
FTBL-15	HAZARDOUS WASTE STORAGE 5 BRICK BLDGS	199010	Includes buildings 625 (SWMU B-1), 627 (SWMU B-2), 632 (SWMU B-3), 633 (SWMU B-4), 634 (SWMU B-5). None of these sites were entered in the CC database. FTBL is seeking formal NFA for all these sites based on historical documentation.
FTBL-16	DEMOLITION RANGE	199010	This site, known as SWMU A-15, may potentially be the site known as T6-A. Though described here as a range, this site was actually a disposal area within a range. This site was not entered in the CC database. FTBL is seeking formal NFA based on historical documentation.
FTBL-17	FORMER COAL STORAGE AREA	199008	This site, known as SWMU A-04, was combined with SWMU A-23 due to proximity and entered into the CC database as CC-A04A23. A Phase I investigation was performed for A-04 under the CC database. This site was later transferred to -R as CC-A04A23. FTBL is seeking NFA for A-04 based on the Phase I results. Future costs for A-23 will be tracked under CC-A04A23 in -R.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTBL-18	INSTALLATION MOTOR POOL	199008	FTBL was unable to determine the exact location and corresponding SWMU ID.
FTBL-19	VEHICLE WASH RACKS (10)	199008	This site may include ten of the SWMUs C-01 through C-12. C-08 and C-11 were entered into the AEDB-CC as CC-C08 and CC-C11D11, respectively. A Phase I investigation was performed for both C-08 and C-11. FTBL is seeking NFA for C-08 and C-11 based on the Phase I results. FTBL is seeking administrative closure for C-01-6,9,10 and 12. C-07 is an active wash rack that may require additional investigation. Program management funds will be used to fund any additional investigation.
FTBL-20	SUPPLY CENTER-BLDG 712	199008	This site is the UST at Building 712. The UST has been removed. This site was closed in the -R database under the Petroleum Program. It was closed in 2000 after the receipt of a DEQ Closure Letter dated October 10, 2000.
FTBL-21	ACID NEUTRALIZATION UNITS (3) BLDG 707	199008	This site includes SWMU I-04. FTBL is seeking NFA on this site based on historical documents. This site was not entered into the CC database.
FTBL-22	INDOOR FIRING RANGE	199010	FTBL is unable to identify the exact location of this site. However, this site would not be eligible for -CC or -R funding.
FTBL-23	TRANSFORMER STORAGE AREA-BLDG 1430	199008	This site includes SWMU B-09. FTBL is currently seeking administrative closure for B-09. This site was not entered in the -CC database.
FTBL-24	SEWAGE TREATMENT PLANT 2	199008	This site is known as SWMU L-11. FTBL has proposed CC-L-11 as a new site in -R database. It has not been approved. FTBL will use PM $ for the preliminary assessment of this site. Depending on the results of the PA, FTBL may seek funds for FY12 for CC-L-11 under the -R database.
FTBL-25	HAZARDOUS WASTE STORAGE-BLDG 1124	199008	This site is known as SWMU B-07. FTBL is seeking NFA based on historical documents. This site was not entered into the -CC database.
FTBL-30	REACTOR CONTAINMENT BLDG	199008	This site is not eligible for DERP funding.
FTBL-32	RUNOFF DISCHARGE DITCH(FROM EQUIP AREA)	199008	This site includes SWMU L-02. FTBL is currently seeking administrative closure for this site. This site was not entered into the -CC database.
FTBL-33	CULLUM WOODS LANDFILL (ACTIVE)	199010	This landfill is designated SWMU A-01. This site was entered as CC-A01 in the -CC database. FTBL is currently seeking administrative closure for this site under the SWMU program. This is a closed

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			landfill subject to Post Closure Care (PCC) under a permit issued by Virginia DEQ.
FTBL-36	ACID NEUTRALIZATION PIT	199008	This site may include the following SWMUs: I01 - I03. FTBL is seeking NFA for I-01 based on historical documents. FTBL is seeking administrative closure for site I-03. I-01 and I-03 were not entered in the -CC database. I-02 was entered in the -CC database as CC-I02. A Phase I investigation was performed under -CC funding. FTBL received informal (e-mail) NFA Phase I approval for I-02.
FTBL-38	DRMO STUMP DUMP	199008	This site is known as SWMU A-03. This site was entered into the CC database as CC-A03. A Phase I investigation was performed under -CC and FTBL received formal NFA Phase I closure for the site.
FTBL-39	DRMO SALVAGE STORAGE AREA	199008	This site may include the following SWMUs: A14, L35, M20, and N11. SWMUs A14 & M20 were entered into the CC database under site IDs CC-A14 and CC-M20. FTBL received NFA for M-20. CC-A14 was opened in the -R database as CC-A14. Funding for landfill gas monitoring will be funded under -R site CC-A14. N-11 and L-35 were not entered in the -CC database. FTBL has formal NFA closure on N-11 and is awaiting NFA closure on L-35.
FTBL-40	PESTICIDE STORAGE-BLDG 2505	199008	This site is known as SWMU L-46. This site was not entered in the -CC database. FTBL is seeking administrative closure for L-46.
FTBL-41	CULLUM WOODS LF CATCHMENT POND	199008	This site is known as A-20. This site is not eligible for DERP funding. A-20 was not entered in the -CC database. FTBL is currently seeking administrative closure for A-20. This site is subject to Post Closure Care (PCC) under the Cullum Woods PCC permit issued by Virginia DEQ.
FTBL-42	AVIATION FUEL STORAGE AREA	199008	This site was unable to be properly identified upon searching Fort Belvoir's records.
FTBL-45	STEAM CLEANING UNIT (CINDER BLOCK BLDG)	199008	This site is known as SWMU M-19. This site was entered and closed in the -CC database as CC-M19.
FTBL-48	SHOP SWEEPER DUMP SITE	199008	This site is known as SWMU M-05. The site was entered and closed in the -CC database as CC-M05.
FTBL-49	EXCAVATED DRUMSITE (1985)	199008	This site is SWMU M-08. This site was entered and closed in the -CC database as CC-M08.
FTBL-50	DUMPS(2) (ABANDONED)	199008	FTBL was unable to determine the exact

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			location of this site and the corresponding SWMU ID.
FTBL-52	UNDERGROUND STORAGE TANKS-INST WIDE	199909	This site was unable to be properly identified upon searching Fort Belvoir's records.
FTBL-53	ELECTRICAL TRANSFORMERS(17)VAR LOCATIONS	199008	This site was unable to be identified upon searching Fort Belvoir's records. However, when taken out of service, all transformers are sampled and analyzed for PCBs and managed through Fort Belvoir's hazardous waste mgmt program.
FTBL-54	AIRFIELD HANGERS-VARIOUS LOCATIONS	199008	This site was unable to be properly identified upon searching Fort Belvoir's records.
FTBL-55	FIRING RANGES-1 PISTOL,2 RIFLE	199008	This site may potentially include the following units: L-39, L-40 and L-41. These units, upon further review, were determined to not fall under the definition of a SWMU by the USEPA (55 FR 30809, July 27, 1990) and by the RCRA Facility Assessment Guidance Document. FTBL received formal administrative closure on L-41. FTBL is currently seeking administrative closure for L-39 and L-40. None of these sites were entered in the -CC database.
FTBL-56	SILVER RECOVERY UNITS (9)	199008	This site may include 9 of the following SWMUs: L19 (bldg 320-4 units), L20 (Bldg 1809), L21 (Bldg 2593), L22 (bldg 2595), N12 (Bldg 214-3 units). None of these sites were entered in the -CC database. FTBL has received formal administrative closure for L-19. FTBL is seeking administrative closure for L-20,21 and 22. FTBL is seeking NFA for site N-12 based on a Phase I investigation.
FTBL-60	PAINTBOOTHS-BLDS 363,1115,1339,1349,1462	199008	FTBL was unable to properly identify these site locations and corresponding SWMU IDs. These buildings may still be active storage facilities.
FTBL-61	DOGUE CREEK FAMILY HOUSING AREA	199404	This site is known as Building 900. This site was entered and closed into the CC database under CC-BLDG900. .
FTBL-62	PETROLEUM CONTAMINATION - BUILDING 1803	200203	This site was caused by a leaking UST at Building 1803. This site was entered and closed to -R as FTBL-62. FTBL received formal NFA for this site in 2001 after the receipt of a DEQ Closure Letter dated March 13, 2001.
FTBL-63	EPG SOLIDWASTE MANAGEMENT UNITS(28)	200009	This site contains various EPG SWMUs (44 total) all subject to the Unilateral Administrative Order issued in September 2005. Such sites are typically named M sites. All of these sites were entered into -CC or -R and are being managed

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			appropriately according to their current database.
FTBL-64	Leaching Cesspools- Bldg 2073- M37	200710	This site was entered in the -CC database as CC-M37. It was later transferred to -R as FTBL-64. FTBL received formal NFA from regulators for this site.
FTBL-65	Septic Tank & Leach Field (B2075)	201012	This site is known as SWMU M-41. It was entered in the -CC database as CC-M41 and transferred and closed in -R as FTBL-65. There is a decision document associated with this site. An unrestricted land use was achieved upon completion of selected remedy (soil and material removal).
FTBL-67	Petroleum Storage Area-Bldg. 2000	200709	This site underwent Phase I and Phase II site investigations in 2006-07. This site was opened in -CC as CC-MPS2000 and transferred to -R as FTBL-67. Due to proximity to SWMU M-26, the groundwater will be monitored for natural attenuation as part of the M-26 monitoring program. As a result, this site was closed out in both AEDB-CC and -R. Monitoring will continue until remedial end points are met.

IRP Schedule

Date of IRP Inception: 198009

Past Phase Completion Milestones

1982	
PA	(FTBL-11 - FORMER GRENADE STG BUNKER)
CS	(FTBL-10 - LEAKING TRANSFORMERS(3)(NEAR DAVISON AF), FTBL-12 - FIRE FIGHTING TRAINING/BURN AREA)
SI	(FTBL-11 - FORMER GRENADE STG BUNKER)
RFA	(FTBL-10 - LEAKING TRANSFORMERS(3)(NEAR DAVISON AF), FTBL-12 - FIRE FIGHTING TRAINING/BURN AREA)
1988	
PA	(FTBL-66 - Sites M-07/18 and AOPC-4)
1989	
PA	(FTBL-68 - M-26, Hydrocarbon Spill Area, FTBL-69 - M-27, Waste Ordnance Pit at Range 1)
RFA	(FTBL-64 - Leaching Cesspools- Bldg 2073- M37, FTBL-65 - Septic Tank & Leach Field (B2075))
1990	
PA	(FTBL-06 - SEWAGE TREATMENT PLANT 1(INACTIVE), FTBL-07 - FUEL STORAGE/AREA 300 BLDGS, FTBL-08 - OIL/WATER SEPARATOR (3), FTBL-17 - FORMER COAL STORAGE AREA, FTBL-18 - INSTALLATION MOTOR POOL, FTBL-19 - VEHICLE WASH RACKS (10), FTBL-20 - SUPPLY CENTER-BLDG 712, FTBL-24 - SEWAGE TREATMENT PLANT 2, FTBL-30 - REACTOR CONTAINMENT BLDG, FTBL-32 - RUNOFF DISCHARGE DITCH(FROM EQUIP AREA), FTBL-39 - DRMO SALVAGE STORAGE AREA, FTBL-42 - AVIATION FUEL STORAGE AREA, FTBL-45 - STEAM CLEANING UNIT (CINDER BLOCK BLDG), FTBL-53 - ELECTRICAL TRANSFORMERS(17)VAR LOCATIONS, FTBL-54 - AIRFIELD HANGERS-VARIOUS LOCATIONS, FTBL-56 - SILVER RECOVERY UNITS (9))
RFA	(FTBL-01 - CLOSED LANDFILL (REVEGETATED), FTBL-02 - INACTIVE LANDFILL(BORDERS ACCOTINK CREEK, FTBL-04 - BATTERY STORAGE AREA-BLDGS 324,1146, FTBL-05 - LABORATORY STORAGE AREA,#305,307,357, FTBL-09 - THOETE ROAD LANDFILL, FTBL-13 - PESTICIDE MIXING ROOM-BLDG 1490, FTBL-14 - HAZ WST STG BLDGS 317A,327C,362,362A,363, FTBL-15 - HAZARDOUS WASTE STORAGE 5 BRICK BLDGS, FTBL-16 - DEMOLITION RANGE, FTBL-21 - ACID NEUTRALIZATION UNITS (3) BLDG 707, FTBL-22 - INDOOR FIRING RANGE, FTBL-23 - TRANSFORMER STORAGE AREA-BLDG 1430, FTBL-25 - HAZARDOUS WASTE STORAGE-BLDG 1124, FTBL-33 - CULLUM WOODS LANDFILL (ACTIVE), FTBL-36 - ACID NEUTRALIZATION PIT, FTBL-38 - DRMO STUMP DUMP, FTBL-40 - PESTICIDE STORAGE-BLDG 2505, FTBL-41 - CULLUM WOODS LF CATCHMENT POND, FTBL-48 - SHOP SWEEPER DUMP SITE, FTBL-49 - EXCAVATED DRUMSITE (1985), FTBL-50 - DUMPS(2) (ABANDONED), FTBL-55 - FIRING RANGES-1 PISTOL,2 RIFLE, FTBL-60 - PAINTBOOTHS-BLDS 363,1115,1339,1349,1462)
SI	(FTBL-68 - M-26, Hydrocarbon Spill Area)
CS	(FTBL-64 - Leaching Cesspools- Bldg 2073- M37, FTBL-65 - Septic Tank & Leach Field (B2075))
1991	
CS	(FTBL-01 - CLOSED LANDFILL (REVEGETATED), FTBL-09 - THOETE ROAD LANDFILL, FTBL-13 - PESTICIDE MIXING ROOM-BLDG 1490, FTBL-14 - HAZ WST STG BLDGS 317A,327C,362,362A,363, FTBL-15 - HAZARDOUS WASTE STORAGE 5 BRICK BLDGS, FTBL-16 - DEMOLITION RANGE, FTBL-22 - INDOOR FIRING RANGE, FTBL-33 - CULLUM WOODS LANDFILL (ACTIVE))
1993	
INV	(FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
ISC	(FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
1994	
ISC	(FTBL-61 - DOGUE CREEK FAMILY HOUSING AREA)
1996	
CAP	(FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
RFA	(FTBL-63 - EPG SOLIDWASTE MANAGEMENT UNITS(28))
ISC	(FTBL-51 - TANK FARM - BLDG 324, 325)

1997	
ISC	(FTBL-52 - UNDERGROUND STORAGE TANKS-INST WIDE)
DES	(FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
IRA	(FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
IMP(C)	(FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
1998	
INV	(FTBL-51 - TANK FARM - BLDG 324, 325)
1999	
CMI(C)	(FTBL-63 - EPG SOLIDWASTE MANAGEMENT UNITS(28))
CAP	(FTBL-51 - TANK FARM - BLDG 324, 325)
DES	(FTBL-51 - TANK FARM - BLDG 324, 325)
2000	
IMP(O)	(FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
CMI(O)	(FTBL-63 - EPG SOLIDWASTE MANAGEMENT UNITS(28))
2002	
LTM	(FTBL-62 - PETROLEUM CONTAMINATION - BUILDING 1803)
PA	(FTBL-67 - Petroleum Storage Area-Bldg. 2000)
2004	
SI	(FTBL-69 - M-27, Waste Ordnance Pit at Range 1)
2006	
RI/FS	(FTBL-68 - M-26, Hydrocarbon Spill Area, FTBL-69 - M-27, Waste Ordnance Pit at Range 1)
IRA	(FTBL-68 - M-26, Hydrocarbon Spill Area)
2007	
IRA	(FTBL-67 - Petroleum Storage Area-Bldg. 2000, FTBL-69 - M-27, Waste Ordnance Pit at Range 1)
SI	(FTBL-66 - Sites M-07/18 and AOPC-4, FTBL-67 - Petroleum Storage Area-Bldg. 2000)
RI/FS	(FTBL-67 - Petroleum Storage Area-Bldg. 2000)
2008	
IMP(C)	(FTBL-51 - TANK FARM - BLDG 324, 325)
RFI/CMS	(FTBL-64 - Leaching Cesspools- Bldg 2073- M37)
RA(C)	(FTBL-68 - M-26, Hydrocarbon Spill Area)
IRA	(FTBL-66 - Sites M-07/18 and AOPC-4)
2009	
DES	(FTBL-65 - Septic Tank & Leach Field (B2075))
RFI/CMS	(FTBL-65 - Septic Tank & Leach Field (B2075))
2011	
CMI(O)	(FTBL-65 - Septic Tank & Leach Field (B2075))
CMI(C)	(FTBL-65 - Septic Tank & Leach Field (B2075))

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

Site ID	Site Name	ROD/DD Title	ROD/DD Date

IRP Schedule

Final RA(C) Completion Date: 201309

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of IRP at Installation (including LTM phase): 203709

FORT BELVOIR IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
FTBL-51	TANK FARM - BLDG 324, 325	IMP(O)						
		LTM						
FTBL-66	Sites M-07/18 and AOPC-4	RI/FS						
FTBL-68	M-26, Hydrocarbon Spill Area	RA(O)						
FTBL-69	M-27, Waste Ordnance Pit at Range 1	RA(O)						

FORT BELVOIR

Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 37/22

Installation Site Types with Future and/or Underway Phases

1 Contaminated Ground Water
(FTBL-005-R-09)
1 Disposal Pit/Dry Well
(FTBL-005-R-10)
3 Explosive Ordnance Disposal Area
(FTBL-018-R-01, FTBL-025-R-01, PBA@MR Belvoir)
3 Firing Range
(FTBL-001-R-02, FTBL-026-R-01, FTBL-027-R-01)
4 Small Arms Range
(FTBL-003-R-01, FTBL-004-R-01, FTBL-007-R-01, FTBL-014-R-01)
1 Storage Area
(FTBL-005-R-01)
2 Training and Maneuver Area
(FTBL-005-R-05, FTBL-024-R-01)

Most Widespread Contaminants of Concern

Munitions and explosives of concern (MEC), Munitions constituents (MC), Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
FTBL-005-R-01	Fort Belvoir North Area (EPG)	IRA	UXO CLEARANCE	2008
FTBL-005-R-10	Munitions Disposal Pit at Range 5	IRA	REMOVAL	2009
FTBL-005-R-10	Munitions Disposal Pit at Range 5	IRA	UXO CLEARANCE	2009

Duration of MMRP

Date of MMRP Inception 200110

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201612/204309

Date of MMRP completion including Long Term Management (LTM): 204607

MMRP Contamination Assessment

Contamination Assessment Overview

In 2001, the Army conducted a Phase II inventory of active and inactive ranges at FTBL, which identified 18 active and inactive ranges. Some of those ranges, but not all, were later enrolled under the Military Munitions Response Program (MMRP). The Army later conducted a subsequent inventory of the FTBL's Closed, Transferring and Transferred (CTT) Range, which identified 15 CTT ranges. Ten of the CTT ranges were listed as closed, and five were listed as transferred. The transferred ranges were the portions of the adjacent closed ranges which were over water bodies, specifically Accotink Bay. As a result of the 2002 Defense Authorization Act, which modified the Defense Environmental Restoration Program to establish the MMRP, the Phase III CTT inventory report was expanded to include an inventory of ranges where Unexploded Ordnance (UXO), Discarded Military Munitions (DMM), and Munitions Constituents (MC) may have been used. The 2002 Defense Authorization Act changes also required that risk assessment codes (RACs) be calculated for all DERP eligible MMRP sites. The Phase III inventory identified 15 sites which were DERP eligible and created site identifications and calculated RACs for each of them.

A site inspection (SI) was completed in 2008, which identified a total of 21 MMRP eligible sites. During the SI, soil samples were collected and evaluated for MC, and a magnetometer surface sweep was performed to identify potential UXO and DMM. UXO clearance had already begun at FTBL-005-R-01, FBNA; therefore, the SI recommended RI/FS, but did not collect any samples. Based on the results of the SI, the contractor recommended 10 sites to remedial investigation (RI) and feasibility study (FS) and no further action for 11 sites.

In 2009, the Army awarded a contract for a RI at six of the main post sites, and RI/FS at two of the sites. Another site, FTBL-004- R-01 is actually the convergence of three range fans over the Accotink Bay, and is considered a water range. No investigations have been conducted at this site.

MEC clearance at FTBL-005-R-01, FBNA was completed in 2009 and the RIs at the main post sites were completed in December 2012. A DD identifying LUCs for FTBL-005-R-01, FBNA is being drafted, and a contract to complete FS through Response Complete at the main post sites is planned for FY13, which will be completed by FY16.

Cleanup Exit Strategy

MEC clearance at FTBL-005-R-01, EPG (FBNA) was completed in 2009. FTBL anticipates LUCs to be finalized by the end of 2012. RIs for six main post sites will be completed by July 2012, after which time FSs will be contracted. Two sites are scheduled for RIP by April 2014. FTBL anticipates RIP/RC for all MR sites by October 2016.

MMRP Previous Studies

	Title	Author	Date
2006			
	Final Historical Records Review for Fort Belvoir	Malcolm Pirnie, Inc.	MAR-2006
	Final Work Plan for Fort Belvoir	Malcolm Pirnie, Inc.	AUG-2006
2008			
	Final Site Inspection for Fort Belvoir	Malcolm Pirnie, Inc.	JAN-2008
	Draft Final AOPC-16 Addendum	Hydrogeologic, Inc.	NOV-2008
	Environmental Investigation Plan, SWMU-M-33	Hydrogeologic, Inc.	DEC-2008
	Final EIP SWMU M-32	Hydrogeologic, Inc.	DEC-2008
	Final Investigation Summary Report SMWU M-32	Hydrogeologic, Incl	DEC-2008
2009			
	Final Technical Memo Sampling Plan -- MEC Burial Pits AOPC-17 and AOPC-18 and Final Tech Memo Sampling Plan additional Soil Stockpile from AOPC-17 and AOPC-18	Hydrogeologic, Inc.	APR-2009
	Final Technical Memo Sampling Plan -- MEC Burial Pits 2O-16 and 2P-16 (AOPC-19)	Hydrogeologic, Inc.	MAY-2009
	Final Environmental Investigation Plan for Engineer Proving Ground (FTBL-005-R-001)	Hydrogeologic, Inc.	MAY-2009
	Final Investigation Summary Report , AOPC-17 and AOPC-18	Hydrogeologic, Inc.	JUN-2009
	Final Investigation Summary Report-- MEC Burial Pits 2O-16 and 2P-16 (AOPC-19)	Hydrogeologic, Inc.	JUN-2009
	Final Investigation Summary Report for Engineer Proving Ground (FTBL-005-R-001)	Hydrogeologic, Inc.	JUN-2009
	Final Investigation Summary Report, AOPC-16	Hydrogeologic, Inc.	AUG-2009
	Removal Action Work Plan-Boob Trap Site (FTBL-024-R-01)	Shaw Enviornmental Inc.	NOV-2009
2010			
	Final Site Specific MEC Removal Action Report	Hydrogeologic, Inc.	MAR-2010
	Site Specific Removal Action Report, Booby Trap Site, Booby Trap Fence Extension	Shaw Environmental, Inc.	APR-2010
2011			
	Remedial Investigation Report, T-16 (FTBL-027-R-01)	Shaw Environmental, Inc.	JUL-2011
2012			
	Final Invesigation Summary Report Solid Waste Management Unit M-33	Hydrogeologic, Inc.	MAY-2012
	Remedial Investigation Report for Four Munitions Response Sites: Demolition Area-01, Demolition Area-USACE TD, Grenade Court, and Booby Trap Site	Shaw Environmental, Inc.	DEC-2012
	Remedial Investigation for Combat Range Complex	Shaw Environmental, Inc.	DEC-2012
2013			
	Remedial Investigation/Feasibility Study Report for the Infiltration Course and Tracy Road Range	Shaw Environmental, Inc.	JAN-2013

FORT BELVOIR

Military Munitions Response Program

Site Descriptions

Site ID: FTBL-001-R-02
Site Name: Infiltration Course

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

Contaminants of Concern: Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201403
RD	200907	201409
IRA	201006	201412
RA(C)	200907	201412
RA(O)	200907	201503
LTM	201504	204503

RIP Date: 201412

RC Date: 201503

SITE DESCRIPTION

This site was originally part of the FTBL-001-R-01 site, but as a result of observations made during the SI field activities, the Small Arms Range Complex site was separated into two MRSs: the Small Arms Range Complex and the Infiltration Course. The Infiltration Course is located north of Accotink Bay and adjacent to the Pig Farm Range. The range first appears on installation maps in 1943, and a memo from the same year states that three machine guns mounted on tripods and explosives were available for use. A 1944 memorandum shows three machine gun emplacements along an enemy trench behind the control tower. Firing occurred from the enemy trench downrange toward the starting trench. Barbed wire is stretched along the course in two locations. According to the 1944 memorandum, the circles on the diagram are craters in which explosives were set. The charges were not to exceed one-half pound and were required to be set in pits below ground.

The Infiltration Course appears on multiple installation maps between 1943 and 1956. The site is currently undeveloped. No MEC or munitions debris was observed during SI field activities. Remnants of a possible machine gun emplacement were observed. The soil sample did not exceed the lead preliminary remediation goals (PRG). Due to the historical use of explosives at the Infiltration Course and the uncertainty associated with the lack of explosive MC data there, the final SI Report (2008) recommended further investigation for MC at the site.

The RI/FS for this site was approved by VDEQ in December 2012.

CLEANUP/EXIT STRATEGY

This site will be at RC by August 2014. LUCs, managed under LTM are anticipated as final remedy.

Site ID: FTBL-003-R-01
Site Name: Combat Range Complex

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 04

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201406
RD	201303	201503
IRA	201103	201602
RA(C)	201303	201602
RA(O)	201303	201604
LTM	201611	204607

RIP Date: 201602

RC Date: 201604

SITE DESCRIPTION

This 320-acre site includes the downrange portion of three overlapping closed ranges. Historical documentation indicates the ranges were primarily operational in the 1940s and 1950s, but references to operational use between the 1930s and 1970s have been identified. This site is part of the Accotink Bay Wildlife refuge and is mainly undeveloped. Munitions reported in historical documentation included: fragmentation grenades, rifle grenades, mortars, and small arms. The FTBL 2008 SI reported observation bunkers, munitions debris, including small arms. No explosives were detected in surface soil samples, but numerous metals exceeded Biological Technical Assistance Group (BTAG) benchmarks.

The SI recommended RI, which began in July 2010, under PBA@MR_Belvoir (PBA 2). Limited MEC and MD were identified on one of the 25 sample grids, which appears to have been used as a limited MEC disposal point. A small arms disposal area was identified adjacent to the discussed grid. Soil samples collected exhibited elevated metals. Additionally, the site is located across Accotink Creek from the Tracey Road Range, Site FTBL-014-R-01. The sample results from the RI were compared to the Tracey Road range fan which suggests that some MC contamination is a result of small arms impact fired from the Tracey Road Range.

The RI was completed in December 2012, and a task order for FS through RC is planned for award in February 2013.This site was included in Fort Belvoir's MMRP LUC project, which establishes LUCs for MR sites as interim measures until the final remedy can be selected. Interim LUCs should be finalized in FY13.

CLEANUP/EXIT STRATEGY

A task order which requires an FS through RC to be completed by FY16 is planned for March 2013.. LUCs are anticipated as final remedy.

Site ID: FTBL-004-R-01
Site Name: Combat Range Complex-Water

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 04

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Soil

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201612

RIP Date: N/A

RC Date: 201612

SITE DESCRIPTION

This MRS was originally defined as the 566-acre Combat Range Complex. The portion of the MRS which extends over the Accotink and Pohick Bays was separated from this site into the 286-acre MRS, FTBL-004-R-01. This 320-acre MRS includes the downrange portion of three overlapping closed range fans. Historical documentation indicates the ranges were primarily operational in the 1940s and 1950s, but references to operational use between the 1930s and 1970s have been identified. This site is part of the Accotink Bay Wildlife refuge and is undeveloped except for trails and unimproved roads. Munitions were used primarily in the 1940s and 1950s. Munitions reported in historical documentation included: fragmentation grenades, rifle grenades, mortars, and small arms. The FTBL 2008 SI reported observation bunkers, munitions debris, including small arms. No explosives were detected in surface soil samples, but numerous metals exceeded BTAG benchmarks. Based on the recommendation of the SI, fieldwork for a RI began in July 2010, under PBA@MR_Belvoir (PBA 2). Limited MEC and MD were identified on one of the 25 grids. The RI report and risk assessment was scheduled to be completed in July 2012. A MEC removal action is not likely to be required at this site. This site includes the water portion of the overall MRS. FTBL is awaiting guidance on cleanup procedures for those sites included in the MRS.

CLEANUP/EXIT STRATEGY

This is the portion of FTBL-003-R-01 that extends over water. Funding requirements will be programmed upon receipt of DoD guidance regarding water ranges.

Site ID: FTBL-005-R-01
Site Name: Fort Belvoir North Area (EPG)

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 03

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Other (ground surface/subsurface)

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200807	201406
RD	201303	201406
IRA	200610	200809
RA(C)	201303	201408
RA(O)	201303	201408
LTM	201409	204309

RIP Date: 201408

RC Date: 201408

SITE DESCRIPTION

FBNA, referred to as Engineer Proving Ground or EPG, is an 807-acre noncontiguous parcel located 1.5 miles northwest of the FTBL Main Post, in Fairfax County. FBNA was acquired by the Army in the early-1940s for use by the FTBL Research, Development, and Engineering Center. The FBNA boundary was first identified on a 1941 archival map and the principal mission was the testing of Army engineer equipment and supplies, specifically landmines. In the 1960s and 1970s, commercial and residential encroachment led to limited activities. The following ten former range areas are located on FBNA:
1 5
1A 5A
2 5B
3 5C
4 Eebee Field.

Munitions found on-site during range clearance activities include various mortars, landmines, rockets, grenades, and small arms. In 2005, FTBL was identified as a BRAC gaining installation, with 8,000 personnel planned for transfer to FBNA. In addition, Fairfax County Parkway Extension project has taken the southern and western boundaries. As a result, nearly half of the 807 acres have been impacted by the construction of two road networks, two parking areas, a 1.5 million square foot facility, and the new infrastructure required to support operations.

This site is included in PBA@MR Fort Belvoir, under PBA 1 (2008 award). Tasks included completion of MEC Clearance, LUC development and inspections, maintenance, and five-year reviews through FY14. Period of performance is modified in 2013 from 2015 to 2014. FTBL has completed MEC removal and clearance operations under PBA 1, and has received NFA with regards to MC from regulators. The FS, PP and DD are currently being drafted. This site was included in Fort Belvoir's MMRP LUC project, which establishes interim LUCs as a non-time critical removal action for MR sites until the final remedy can be selected. Interim LUCs should be finalized in FY13.

CLEANUP/EXIT STRATEGY

FTBL will conduct annual LUC inspections and five-year reviews at this site under the LTM phase.

Site ID: FTBL-005-R-05
Site Name: Inert Mine Testing Area at Range 5

STATUS

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions constituents (MC)

Media of Concern: Groundwater

Phases	Start	End
PA	200803	200803
SI	200807	200912
RI/FS	201001	201404
RD	201303	201406
RA(C)	201303	201408
RA(O)	201409	204309

RIP Date: 201409

RC Date: 204309

SITE DESCRIPTION

This site was identified as Site 33 in the 1990 USATHAMA Phase I/II Environmental Baseline Survey (EBS) and is described as a 10-acre open field located approximately 200 ft east of Bldg 2091, on the west side of FBNA, formerly Engineer Proving Ground. The site was used as a training area for inert mine detection and the detonation of up to 22 pound explosive charges in detonation pits until the late-1960s to early-1970s. Since its last use, the surface of the site has been disturbed several times during various MEC removal actions.

In 2005, BRAC legislation identified FTBL as a gaining installation for approximately 20,000 civilians and service members; 8,500 of which were to be transferred to FBNA. A second project for the Fairfax County Parkway (Parkway) extension was planned concurrently with the BRAC construction. In response to the BRAC announcement, the USEPA issued a RCRA 3013 UAO in 2005 to Engineer Proving Ground, now referred to as FBNA, requiring the Army in investigate potential releases of hazardous substances. FTBL had begun investigation activities at this site in 2006 under the UAO. The site was previously identified as SWMU M-33. The site was not impacted by the construction.

Preliminary sampling was performed in an area measuring 75 ft by 100 ft that contained the detonation pits. Various metals were detected in the soil samples, but at levels below site background concentrations for FBNA. The sampling efforts did not address the potential occurrence of MEC or MC, or potential impacts to areas outside the detonation pits. In 2006, FTBL investigated SWMU M-33 and identified explosives in groundwater. A Phase II investigation was conducted as under Fort Belvoir's MR PBA 1, site ID MR_PBA @Belvoir, (contract number W91ZLK-05-D-0010, DO 0001). An investigation summary report risk assessment was submitted to regulators in August 2009. The USEPA requested additional sampling for explosives and perchlorate. A revised risk assessment was submitted in December 2010. In August 2012, FTBL received USEPA concurrence on the RI and risk assessment. Potential exposure risks at the site are to hypothetical child residents.

The FS was submitted to the USEPA for review in October 2012. RIP planned by end of 2013. Site management of this site is performed under the above PBA through 2014.

An adjacent site (M-32, site ID FTBL-005-R-08) has been combined with this site for regulatory and funding purposes, because the constituents and media of concern are identical.

CLEANUP/EXIT STRATEGY

Finalize a PP and a DD under PBA@MR_Belvoir (2008 award). FTBL anticipates groundwater monitoring and LUCs will be selected as final remedy.

Site ID: FTBL-005-R-09
Site Name: FBNA Soils and Groundwater

STATUS

Regulatory Driver: RCRA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern (MEC), Polycyclic Aromatic Hydrocarbons (PAH)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	200906	200907
CS	200908	200909
RFI/CMS	201105	201403

RIP Date: N/A

RC Date: 201403

SITE DESCRIPTION

FTBL's 2007 BRAC Environmental Impact Statement proposed a child development center (CDC) on FBNA. Due to the former military uses at FBNA, FTBL performed a MEC clearance and environmental investigation to ensure no risk of MEC, and that soils and groundwater were compared against residential standards. During the MEC clearance, six emplaced landmines were identified and properly disposed of in accordance with Virginia's Solid Waste Regulations. Upon completion of the MEC clearance, FTBL performed an extensive soil and groundwater investigation. Soil samples collected from four borings exhibited polycyclic aromatic hydrocarbons (PAHs) above residential standards. Additionally, soil samples collected from the landmine locations exhibited MC (2,4/6-DNT). One groundwater sample collected from a groundwater well adjacent to the site exhibited MC (RDX).

In January 2012, FTBL performed a subsequent investigation to further evaluate the contaminated groundwater and to isolate the areas with PAH contamination and explosives contamination. During that investigation, several groundwater wells associated with CC-MPS2009 were sampled and analyzed for explosives to determine whether the source of the RDX was up gradient. None of the CC-MPS2009 wells exhibited any explosives.

Once the soil contamination was delineated, FTBL removed approximately 300 cubic yards of soil and disposed of it in accordance with Virginia Solid Waste Regulations, and collected confirmation samples.

In October 2012, FTBL submitted an RI/FS to the USEPA for review. The risk assessment, which included the confirmation sample results in the report indicated there are no unacceptable risk at the site with regards to PAHs or explosives. The USEPA indicated in their January 2013 comments on the RI/FS that the Army need to monitor groundwater from the adjacent site (CC-MPS2009) to ensure that petroleum contamination doesn¿t migrate towards the CDC site. The FS should be finalized in FY13 or the first quarter of FY14.

CLEANUP/EXIT STRATEGY

The risk assessment indicates there are no known risks associated with this site. FTBL anticipates that LUCs will be managed under site FTBL-005-R-01, and that groundwater monitoring at an adjacent site (CC-MPS2009) will be conducted.

Site ID: FTBL-005-R-10
Site Name: Munitions Disposal Pit at Range 5

STATUS

Regulatory Driver: RCRA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern (MEC), Other (PCE)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	200809	200812
CS	200901	200906
RFI/CMS	200906	201410
IRA	200809	200907
CMI(C)	201302	201410
CMI(O)	201410	204309

RIP Date: 201410

RC Date: 204309

SITE DESCRIPTION

Monitoring described below for this site will be conducted in accordance with FTBL's USEPA issued 2005 RCRA Section 3013 UAO. This site was identified as a MEC disposal pit in September-October 2008. In addition to MEC, field crews excavated a 55-gallon eroded drum which exhibited odors on October 2008. Subsequent air samples from the drum and soil samples collected from below the drum indicated the presence of trichloroethylene (TCE). The drum and contaminated soils were removed and disposed of off-site.

Upon completion of the MEC clearance in June 2009, the contractor collected numerous soil samples from within the pits and installed groundwater wells. Contaminants in soils identified included: TCE, polychlorinated biphenyls, and 2,4/6-dinitrotoluene. Contaminants in groundwater included TCE, naphthalene, 2,4/6-dinitrotoluene, and RDX. TCE levels from several wells ranged between 50 ug/L and 200 ug/L. As of September 2010, the downgradient extent of the contamination had not been identified. Fort Belvoir and, therefore, the contractor lost access to the site in September 2010, due to BRAC related construction. The access point was reopened in May 2012. The contractor submitted an addendum to the investigation plan, which included three downgradient wells to assist with delineation. The USEPA requested a series of seven sets of nested wells to determine the thickness of the TCE plume. The contractor subsequently collected samples from existing wells to assist with placement of new wells. The groundwater samples indicated that degradation of the TCE plume was occurring.

In September 2012, FTBL, the radiation contractor, and the new USEPA Remediation Manager assigned to FTBL met on-site to discuss possible groundwater well locations. It was later determined that the existing well network may be adequate because the explosives levels fall with acceptable risk range. It was determined that FTBL would continue monitoring TCE contamination under the USEPA issued RCRA 3013 UAO for a couple of years to see if TCE levels would degrade below MCLs.

This site is located approximately 300 ft from the installation boundary. Data indicates that plume is migrating towards a drainage feature which bisects the private property and the installation. At this time, there is no data to determine whether contamination is migrating off-site and onto private property; however, the natural drainage feature does appear to separate the residence and FBNA. Additionally, the residence appears to be at a higher elevation than the disposal pit. The work for this site is currently conducted under Contract # W91ZLK-05-D-0010, Task Order 0001. Period of Performance ends December 2015; however, it will be modified to end December 2014.

CLEANUP/EXIT STRATEGY

FTBL will continue to conduct groundwater monitoring under the 2005 RCRA 3013 UAO to monitor TCE degradation.

Site ID: FTBL-007-R-01
Site Name: Grenade Court

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Other (ground surface/subsurface)

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201410
RD	201303	201506
IRA	201103	201601
RA(C)	201303	201601
RA(O)	201303	201605
LTM	201611	204607

RIP Date: 201601

RC Date: 201605

SITE DESCRIPTION

This 100-acre MRS is centrally located on the installation. The MRS lies on Accotink Creek and is divided lengthwise by Poe Road. An unpermitted landfill is adjacent to the site (CC-A12). Historical reports indicate MRS construction began March 21, 1941, and appear to be operational until 1949, at which time a large AST farm appears to have been built. Potential munitions used were live and practice hand grenades. Sandbag emplacements were built on the north end of the range and appeared to have been designed for live ordnance usage. From a map titled Belvoir General Site Plan, the tank farm appears to have been removed and dismantled by 1961. The majority of the area is currently unoccupied and heavily wooded. Recreational trails are located to the south of the site.

The 2008 FTBL SI recommended an RI with regards to MC. Two of the three surface soil samples collected from this site exhibited elevated levels of metals, not all of which were MC. RI was completed in December 2013, under PBA@MR_Belvoir (PBA 2). No MEC or MD indicating the use of live ordnance were identified. As a result, FTBL proposed no MC sampling based on the lack of MD. In 2010 the boundary of the adjacent landfill was expanded to include a larger portion of the surface danger zone associated with grenade use. If additional sampling with regards to Resource Conservation and Recovery Act (RCRA) metals is required, sampling will likely be performed under Installation Restoration Program (IRP). A task order requiring FS through RC is expected to be awarded in February, 2013.

This site was included in Fort Belvoir's MMRP LUC project, which establishes interim LUCs for MR sites non-time critical removal actions under CERCLA until the final remedy can be selected. Interim LUCs should be finalized in FY13.

CLEANUP/EXIT STRATEGY

A task order which requires an FS through RC to be completed by FY16 is planned for March 2013. LUCs are anticipated as final remedy.

Site ID: FTBL-014-R-01
Site Name: Tracy Road Range

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

Contaminants of Concern: Munitions constituents (MC)

Media of Concern: Soil

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201403
RD	200907	201409
IRA	201006	201502
RA(C)	200904	201502
RA(O)	200907	201503
LTM	201504	204503

RIP Date: 201502

RC Date: 201503

SITE DESCRIPTION

This site was a small arms range which was completed in 1941. The range consists of one impact berm approximately 60 ft long and a second impact berm approximately 210 meters long, which ran parallel, about 120 ft apart. A bunker was located behind the smaller western berm, which contained small chambers used for target and supply storage, and well as limited use administrative space. Two firing points were located to the east at 200 and 300 yards, and a third was planned at 500 yards. Training is believed to have occurred during the 1940s and 1950s. During training exercises, the targets were positioned above the berms, causing soldiers to fire over the berms. Fort Belvoir's 2008 SI Report identified .30 caliber small arms bullets in the eastern berm; therefore, the site was recommended for remedial investigation with an emphasis of munitions constituents, specifically metals associated with small arms.

In the 1970s, FTBL used the area separating the two berms for a soil borrow area and then as a landfill. The landfill was entered into post-closure care in 1993 under Virginia's Solid Waste Regulations. The landfill was also identified in Fort Belvoir's Part B hazardous waste permit, as site A-02. The berms associated with the range were later identified as Solid Waste Management Units in FTBL's Resource Conservation and Recovery Act, Part B Hazardous Waste Storage Permit. In 2012, FTBL received the USEPA's agreement that sites L-39 and L-40 were not considered SWMUs, because of their small arms related activities.

The site was selected for development on the eastern portion of the site, where the former firing points were located. In 2009, FTBL collected soil samples and analyzed for MC (metals) to determine what risks were present, if any. Sample results did not exhibit levels above Virginia's action levels for lead.

An RI/FS was completed for this site in January 2013. During the RI phase, soil samples were collected from both berms and field analyzed using XRF. Samples were lab verified. As a result, metals contamination associated with small arms usage was delineated in both berms. A risk assessment shows there are minimal exposure risks to a child resident at the site; however, since the landfill is still in place and the site is categorized as industrial, it will not be developed for residential purposes. The FS evaluates no action, LUCs, and soil removal. There is very little documentation regarding the actual locations of the berms when the landfill cap was installed, and how the two are related.

CLEANUP/EXIT STRATEGY

FTBL anticipates that LUCs will be selected as final remedy in FY14 and will be managed under the LTM phase.

Site ID: FTBL-018-R-01
Site Name: Demolition Area - 01

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 03

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Other (ground surface/subsurface)

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201406
RD	201303	201501
IRA	201103	201602
RA(C)	201303	201602
RA(O)	201303	201604
LTM	201611	204607

RIP Date: 201602

RC Date: 201604

SITE DESCRIPTION

This 420-acre MRS is located in the northeastern portion of FTBL. It was first identified on a 1940 archival map displaying tactical training areas and appeared to have been used between 1940 and 1951. A housing area was constructed in the central portion of this MRS in the 1980s. A fence separating the housing area from the surrounding natural areas is maintained by FTBL, but the MRS is accessible to the public. In 2008, a SI recommended that the MRS be separated into MRSs: Demolition Area -01 (312.5 acres) and Demolition Area - 02 (107.5 acres). This MRS was designated Demolition Area - 01, and the two western most sections should be designated Demolition Area - 02 (FTBL-018-R-02). Historical documentation from 1944 states this site was used for combat engineer demolition training. Demolition materials likely to be used include: bulk explosives, shape charges, cratering charges, and time fuse. Other materials include blasting caps, dynamite, and flare signal rockets. The area, primarily undeveloped, consists of a portion of the Jackson Miles Abbott Wetland Refuge and a wildlife corridor. The 2008 SI noted one MEC item (smoke grenade) and several possible blast holes. No soil samples collected during the SI exceed the range of background levels for MC. As a result of the SI findings and based on historical usage of the MRS, the site was recommend RI for MEC and MC. RI fieldwork began in July 2010, during which time no MEC was identified; however, numerous training landmines and an area where the fusing mechanisms were disposed of were identified. Award of a task order requiring FS through RC is scheduled to be awarded in February 2013.

This site was included in Fort Belvoir's MMRP LUC project, which establishes LUCs for MR sites as interim measure until the final remedy can be selected. Interim LUCs will be finalized in FY13.

CLEANUP/EXIT STRATEGY

A task order which requires an FS through RC to be completed by FY16 is planned for March 2013. LUCs are anticipated as final remedy.

Site ID: FTBL-024-R-01
Site Name: Booby Trap Site

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 06

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Other (ground surface/subsurface)

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201410
RD	201303	201506
IRA	201106	201512
RA(C)	201303	201512
RA(O)	201303	201603
LTM	201611	204607

RIP Date: 201512

RC Date: 201604

SITE DESCRIPTION

This MRS is located in the southeastern portion of FTBL along Gunston Cove. The site was initially identified from a 1983 memorandum that identified it as a one-acre site within Training Area T-1A, and was used for 24 days during 1983. The MRS was subsequently identified on several installation Training Area maps dating from 1987 and 1989. The installation maps indicated the MRS was approximately four acres, but no additional information was provided regarding the amount of use or training activities which took place. It is believed this MRS may have been associated with the Engineering School, and included activities such as arming and disarming of practice firing devices and/or the installation and removal of booby traps within an area.

The site is undeveloped and wooded. The 2008 SI recommended RI for this MRS. In the fall of 2008, a recreational vehicle travel camp and cabin area was planned adjacent to the parcel. As a result, FTBL installed fencing as interim measures until the RI could be completed. During the fence installation, construction workers identified several emplaced training landmines along an old access road, outside of the four-acre MRS. Consequently, the MRS was expanded and a MEC removal action was planned. In 2009, a contract was awarded for RI with a MEC removal action at this site. The RI was completed in December 2012. A task order requiring FS through RC is planned for award in February 2013. Although there was no evidence of MEC found during the RI or the removal action, this site was included in Fort Belvoir's MMRP LUC project, which establishes LUCs for MR sites as interim measures until the final remedy can be selected. Interim LUCs should be finalized in FY13.

CLEANUP/EXIT STRATEGY

A task order which requires an FS through RC to be completed by FY16 is planned for March 2013. LUCs are anticipated as final remedy.

Site ID: FTBL-025-R-01
Site Name: Demolition Area - USACE

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Other (ground surface/subsurface)

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201410
RD	201303	201506
RA(C)	201303	201512
RA(O)	201303	201603
LTM	201611	204607

RIP Date: 201512

RC Date: 201604

SITE DESCRIPTION

This 489-acre MRS is located in the northeastern portion of FTBL and was first identified as a demolition training area on a 1940 archival map displaying tactical training areas. Northeastern portions of the MRS are currently operated by the USACE-Humphrey Engineer Center, and the remainder of the MRS is undeveloped. The Demolition Area is separated into two MRSs based on the recommendation of the 2008 SI.

Historical documents from 1944 state that the MRS was used primarily to train engineers in the use of demolition materials and to practice demolition techniques. Demolition took place either on the surface, within steel pits, or below ground. Materials that may have been used include explosives, shape charges, cratering charges, and time fuzes. Other items that may have been used within the MRS include: blasting caps, dynamite, and flare signal rockets. Based on installation maps, the MRS was operated between 1940 and approximately 1951.

In 2008, the site description for this MRS changed from Demolition Area-transferred (TD) to Demolition Area USACE, as sites that are under Army or DoD control are not TD property. In 2008, a SI report recommended RI for this MRS with regards to MEC and MC.

The RI under FTBL's PBA@MR Belvoir (2009 award) was completed in December 2012. Soil samples collected did not exhibit MC above RBCs. A task order for FS through RC is planned to be awarded in February 2013.

CLEANUP/EXIT STRATEGY

A task order which requires an FS through RC to be completed by FY16 is planned for March 2013. LUCs are anticipated as final remedy.

Site ID: FTBL-026-R-01
Site Name: Mines and Booby Trap Area

STATUS

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Soil

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	201110	201412
RD	201303	201505
IRA	201106	201512
RA(C)	201303	201512
RA(O)	201303	201603
LTM	201611	204607

RIP Date: 201512

RC Date: 201603

SITE DESCRIPTION

This site encompasses 110 acres within the western portion of the installation near Davison Army Airfield. According to historical documents from 1943, the following practical exercises took place at the site: installation and removal of booby traps in wire entanglements and installation and disarming of booby traps and AP mines. The site is believed to have been operational between 1943 and 1947. Potential munitions used at the site include demolition firing devices and practice antipersonnel mines. The majority of the area is currently undeveloped. No MEC, munitions debris, or evidence of former range activities were observed at the MRS during the SI field inspections. No explosives were detected above laboratory reporting limits, and none of the soil samples exceed the documented range of background levels for MC. The Final SI Report (2008) recommended NFA at the site.

In 2010, a landmine was discovered and as a result an RI is planned. A task order requiring RI through RC is planned for award in January 2013. This site was included in Fort Belvoir's MMRP LUC project, which establishes LUCs for MR sites as interim measure until the final remedy can be selected. Interim LUCs should be finalized in FY13.

CLEANUP/EXIT STRATEGY

A task order which requires an RI/FS through RC to be completed by FY16 is planned for March 2013. LUCs are anticipated as final remedy.

Site ID: FTBL-027-R-01
Site Name: T-16

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

Contaminants of Concern: Munitions and explosives of concern (MEC)

Media of Concern: Other (ground surface/subsurface)

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201410
RD	201303	201506
IRA	201103	201512
RA(C)	201303	201512
RA(O)	201303	201603
LTM	201611	204607

RIP Date: 201512

RC Date: 201603

SITE DESCRIPTION

This 232-acre site is in the north central portion of FTBL, immediately east of the T-15 Training Area. The historical use of the site is unconfirmed, but based on a review of archival maps, the area appears to have been used for various combat and field training areas between 1926 and 1987. A reference as to the specific type of munitions usage was not located. This site is currently undeveloped, with the exception of a communications facility on the eastern side. The site is bisected by a newly construction road. The western side is anticipated to be converted a wetland refuge. Three unpermitted solid waste landfills were identified in this area. The FTBL 2008 SI reported numerous depressions which appeared to be fighting positions and weapons emplacements. Small arms blank were identified. The SI recommended RI for this site.

An RI began in July 2010 under the FTBL PBA@MR Belvoir (2009 award) and was concluded in 2011. MEC was not identified. Regulators concurred with no sampling at this site with regards to MC. The RI for this site was originally accelerated due to potential expansion of school, which as of FY13 is not funded. A task order requiring FS through RC is planned for award in February 2013. This site was also included in a 2011 USACE contract to develop interim LUCs until the final remedy is selected.

CLEANUP/EXIT STRATEGY

A task order which requires an FS through RC to be completed by FY16 is planned for March 2013. LUCs are anticipated as final remedy.

Site ID: PBA@MR Belvoir
Site Name: PBA@MMRP Ft Belvoir

STATUS

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Explosives, Munitions and explosives of concern (MEC), Munitions constituents (MC), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
PA	200110	200305
SI	200504	200801
RI/FS	200907	201409
IRA	200907	201409
RA(C)	200907	201409
RA(O)	200907	201412

RIP Date: 201409

RC Date: 201412

SITE DESCRIPTION

FTBL currently has two MR PBA contracts which were combined under this site identification number. PBA 1 W91ZLK-05-D-0010, TO 0001, awarded in July 2008 includes work for the following sites:
FTBL-005-R-01 FTBL-005-R-04
FTBL-005-R-05 FTBL-005-R-06
FTBL-005-R-07 FTBL-005-R-08
IR site FTBL-65.

FTBL is finalizing PPs and DDs for
FTBL-005-R-01 FTBL-005-R-04
FTBL-005-R-06 FTBL-005-R-07
FTBL-005-R-08.

Future RA(O) costs will be required for FTBL-005-R-05 beyond contract terms, which are identified in site records. Note that Fieldwork for this PBA is approximately two years behind. Contract Line Item Number (CLINs) identified in PBA for specific years are pushed back two years.] Period of performance for this PBA will be modified from December 31, 2015 to December 31, 2014, per Contracting Officer¿s direction.

PBA II (W912DR-09-D-0005, DO 0003) includes RI for the following MR sites:
FTBL-003-R-01 FTBL-007-R-01
FTBL-018-R-01 FTBL-024-R-01
FTBL-025-R-01 FTBL-027-R-01.

RIP is anticipated for sites FTBL-001-R-02 and FTBL-014-R-01, in addition to MEC removal up to two ft for site FTBL-24-R-01. Options for groundwater sampling at the four IR sites are included; however, were de-scoped in 2012 due to changes in site conditions. Groundwater sampling for FTBL-68 will continue as planned.

CLEANUP/EXIT STRATEGY

See individual PBA I and II site cleanup/exit strategies.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
FTBL-001-R-01	Small Arms Range Complex	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-002-R-01	Small Arms Range Complex-Water	200801	Based on the Final Site Inspection dated January 2009, this MRS was combined with the adjacent Combat Range Complex-TD to form Combat and Small Arms Range Complex-TD FTBL-004-R-01. All future site actions will be carried out under FTBL-004-R-01.
FTBL-005-R-04	Burial Pit at Range 1A	200909	FTBL submitted an investigation summary report for this site in August, 2009, recommending no further action. US EPA confirmed acceptance of report via email on August 26, 2009.
FTBL-005-R-06	Waste Ordnance Pits at Range 5	200909	A draft and a final investigation summary report for this soil and groundwater investigation were submitted to the regulators in January and in May 2007, respectively. This investigation found low level explosives in the groundwater. Costs are covered under PBA@MR Belvoir.
FTBL-005-R-07	Troop Training Area at Range 5B	201006	FTBL submitted a technical memorandum in October, 2009 recommending no further action for this site. US EPA agreed via email sent October 30, 2009.
FTBL-005-R-08	Range 5 (Building 5091)	201006	FTBL submitted an investigation summary report in April, 2009 recommending no further action for soils associated with this site. The report also recommended that the groundwater contamination for this site be managed under FTBL-005-R-05, M-33. US EPA concurred with these recommendations via email, dated May 19, 2009.
FTBL-006-R-01	Fairfax Range	200801	Based on the Final HRR dated March 2006, this MRS was determined to be part of AA Range and not a separate range. Combined with adjacent ranges to form Small Arms Range Complex FTBL-001-R-01. All future site actions will be carried out under FTBL-001-R-01.
FTBL-008-R-01	Gunston Road 1000" Rifle Range	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-009-R-01	Lorton Combat Range	200801	Based on the Final HRR dated March 2006, this MRS was combined with adjacent ranges to form Combat Range Complex FTBL-002-R-01. All future site actions will be carried out under FTBL-002-R-01.
FTBL-010-R-01	Lorton Combat Range-TD	200801	Based on the Final HRR dated March 2006, this MRS was combined with adjacent ranges to form Combat Range

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
			Complex - TD FTBL-004-R-01. All future site actions will be carried out under FTBL-004-R-01.
FTBL-011-R-01	Lorton Landscape Range	200801	Based on the Final HRR dated March 2006, it was determined that the range fan should be shortened, thereby causing the entire range to be located within the operational range.
FTBL-012-R-01	Pig Farm Range	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-013-R-01	Pig Farm Range-TD	200801	Based on the Final HRR dated March 2006, this MRS was eliminated when acreage reduction resulted from the elimination of the firing fan, which was based on presence of a berm.
FTBL-015-R-01	Tracy Road Range-TD	200801	Based on the Final HRR dated March 2006, this MRS was eliminated when acreage reduction resulted from the elimination of the firing fan, which was based on presence of a berm.
FTBL-016-R-01	Range T-15	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-017-R-01	Congressional Demonstration Area	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-018-R-02	Demolition Area-02	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-019-R-01	Entrenchment and Gas School Area	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-020-R-01	Gas Area	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-021-R-01	Mock Village	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-022-R-01	Mounted Pistol Range	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.
FTBL-023-R-01	Southwest Pistol Range	200801	Based on the Final Site Inspection dated January 2008, this MRS was recommended for No Further Action.

MMRP Schedule

Date of MMRP Inception 200110

Past Phase Completion Milestones

2003

PA	(FTBL-001-R-01 - Small Arms Range Complex, FTBL-001-R-02 - Infiltration Course, FTBL-002-R-01 - Small Arms Range Complex-Water, FTBL-003-R-01 - Combat Range Complex, FTBL-004-R-01 - Combat Range Complex-Water, FTBL-005-R-01 - Fort Belvoir North Area (EPG), FTBL-006-R-01 - Fairfax Range, FTBL-007-R-01 - Grenade Court, FTBL-008-R-01 - Gunston Road 1000" Rifle Range, FTBL-009-R-01 - Lorton Combat Range, FTBL-010-R-01 - Lorton Combat Range-TD, FTBL-011-R-01 - Lorton Landscape Range, FTBL-012-R-01 - Pig Farm Range, FTBL-013-R-01 - Pig Farm Range-TD, FTBL-014-R-01 - Tracy Road Range, FTBL-015-R-01 - Tracy Road Range-TD, FTBL-016-R-01 - Range T-15, FTBL-017-R-01 - Congressional Demonstration Area, FTBL-018-R-01 - Demolition Area - 01, FTBL-018-R-02 - Demolition Area-02, FTBL-019-R-01 - Entrenchment and Gas School Area, FTBL-020-R-01 - Gas Area, FTBL-021-R-01 - Mock Village, FTBL-022-R-01 - Mounted Pistol Range, FTBL-023-R-01 - Southwest Pistol Range, FTBL-024-R-01 - Booby Trap Site, FTBL-025-R-01 - Demolition Area - USACE, FTBL-026-R-01 - Mines and Booby Trap Area, FTBL-027-R-01 - T-16, PBA@MR Belvoir - PBA@MMRP Ft Belvoir)

2008

SI	(FTBL-001-R-01 - Small Arms Range Complex, FTBL-001-R-02 - Infiltration Course, FTBL-002-R-01 - Small Arms Range Complex-Water, FTBL-003-R-01 - Combat Range Complex, FTBL-004-R-01 - Combat Range Complex-Water, FTBL-005-R-01 - Fort Belvoir North Area (EPG), FTBL-006-R-01 - Fairfax Range, FTBL-007-R-01 - Grenade Court, FTBL-008-R-01 - Gunston Road 1000" Rifle Range, FTBL-009-R-01 - Lorton Combat Range, FTBL-010-R-01 - Lorton Combat Range-TD, FTBL-011-R-01 - Lorton Landscape Range, FTBL-012-R-01 - Pig Farm Range, FTBL-013-R-01 - Pig Farm Range-TD, FTBL-014-R-01 - Tracy Road Range, FTBL-015-R-01 - Tracy Road Range-TD, FTBL-016-R-01 - Range T-15, FTBL-017-R-01 - Congressional Demonstration Area, FTBL-018-R-01 - Demolition Area - 01, FTBL-018-R-02 - Demolition Area-02, FTBL-019-R-01 - Entrenchment and Gas School Area, FTBL-020-R-01 - Gas Area, FTBL-021-R-01 - Mock Village, FTBL-022-R-01 - Mounted Pistol Range, FTBL-023-R-01 - Southwest Pistol Range, FTBL-024-R-01 - Booby Trap Site, FTBL-025-R-01 - Demolition Area - USACE, FTBL-026-R-01 - Mines and Booby Trap Area, FTBL-027-R-01 - T-16, PBA@MR Belvoir - PBA@MMRP Ft Belvoir)
PA	(FTBL-005-R-05 - Inert Mine Testing Area at Range 5)
IRA	(FTBL-005-R-01 - Fort Belvoir North Area (EPG))
RFA	(FTBL-005-R-04 - Burial Pit at Range 1A, FTBL-005-R-06 - Waste Ordnance Pits at Range 5, FTBL-005-R-07 - Troop Training Area at Range 5B, FTBL-005-R-08 - Range 5 (Building 5091))

2009

RFA	(FTBL-005-R-09 - FBNA Soils and Groundwater, FTBL-005-R-10 - Munitions Disposal Pit at Range 5)
IRA	(FTBL-005-R-10 - Munitions Disposal Pit at Range 5)
CS	(FTBL-005-R-04 - Burial Pit at Range 1A, FTBL-005-R-06 - Waste Ordnance Pits at Range 5, FTBL-005-R-09 - FBNA Soils and Groundwater, FTBL-005-R-10 - Munitions Disposal Pit at Range 5)

2010

SI	(FTBL-005-R-05 - Inert Mine Testing Area at Range 5)
CS	(FTBL-005-R-07 - Troop Training Area at Range 5B, FTBL-005-R-08 - Range 5 (Building 5091))

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

MMRP Schedule

Final RA(C) Completion Date: 201602

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of MMRP at Installation (including LTM phase): 204607

FORT BELVOIR MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
FTBL-001-R-02	Infiltration Course	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-003-R-01	Combat Range Complex	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-004-R-01	Combat Range Complex-Water	RI/FS						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-005-R-01	Fort Belvoir North Area (EPG)	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-005-R-05	Inert Mine Testing Area at Range 5	RI/FS						
		RD						
		RA(C)						
		RA(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-005-R-09	FBNA Soils and Groundwater	RFI/CMS						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-005-R-10	Munitions Disposal Pit at Range 5	RFI/CMS						
		CMI(C)						
		CMI(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-007-R-01	Grenade Court	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						

FORT BELVOIR MMRP Schedule

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
FTBL-014-R-01	Tracy Road Range	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-018-R-01	Demolition Area - 01	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-024-R-01	Booby Trap Site	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-025-R-01	Demolition Area - USACE	RI/FS						
		RD						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-026-R-01	Mines and Booby Trap Area	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
FTBL-027-R-01	T-16	RI/FS						
		RD						
		IRA						
		RA(C)						
		RA(O)						
		LTM						

FORT BELVOIR MMRP Schedule

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
PBA@MR Belvoir	PBA@MMRP Ft Belvoir	RI/FS						
		IRA						
		RA(C)						
		RA(O)						

FORT BELVOIR

Army Defense Environmental Restoration Program
Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 45/13

Installation Site Types with Future and/or Underway Phases

1 Above Ground Storage Tank
(CC-F06)
2 Contaminated Fill
(CC-MP1, CC-MP5)
6 Contaminated Ground Water
(CC-MP2, CC-MPS2009, CCBLDG1124, CCBLDG2209, CCBLDG3161, CCPBA@Belvoir)
1 Contaminated Sediments
(CC-AOPC-20 BNA)
1 Drainage Ditch
(CC-MP10)
12 Landfill
(CC-A025, CC-A05, CC-A06, CC-A07, CC-A08A16, CC-A09, CC-A11, CC-A12, CC-A14, CC-A26, CC-A29, CC-N23)
1 Oil Water Separator
(CC-L09)
1 Sewage Treatment Plant
(CC-L45)
2 Spill Site Area
(CC-A04A23, CC-A24)
4 Storage Area
(CC-E01, CC-E06, CC-E14, CC_E10)
1 Surface Disposal Area
(CC-MP9)

Most Widespread Contaminants of Concern

Metals, Pesticides, Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Sediment, Soil, Surface Water

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
CC-MPS2009	PSAs 2009, 2033, and 2034	IRA	REMOVAL	1997
CCBLDG3161	Bg 3161- Davison Army Airfield Fuel Yard	FRA	DUAL-PHASE EXTRACTION	2002
CCBLDG773	Former Building 773	FRA	OTHER	2003
CCBLDG2209	Bldg 2209/2217- Former Military Barracks	FRA	GROUND WATER TREATMENT	2004
CCBLDG2209	Bldg 2209/2217- Former Military Barracks	FRA	SOIL VAPOR EXTRACTION	2008
CCBLDG305	Bldg 305 - Research & Development Center	FRA	DUAL-PHASE EXTRACTION	2008
CCBLDG1124	Bldg 1124 - Vehicle Fueling Facility	FRA	DUAL-PHASE EXTRACTION	2009
CC-G13	B1453 Former USTs & Related Contam.	IRA	REMOVAL	2011
CC-MP3	Arts & Crafts Cntr Petroleum Cont.	IRA	WASTE REMOVAL - SOILS	2011
CC-MP4	Contaminated Soil at 9th and Gunsto	IRA	WASTE REMOVAL - SOILS	2011
CC-MP7	Future OSEG Facility	IRA	WASTE REMOVAL - SOILS	2011

CR Summary

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
CC-AOPC-20 BNA	Contaminated Soil and Groundwater	IRA	OTHER	2013
CC-MP6	1425 Pipeline Contamination	FRA	WASTE REMOVAL - SOILS	2013
CC-MP8	AAFES Shoppette Project	FRA	REMOVAL	2013

Duration of CR

Date of CR Inception: 197306

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201606/204506

Date of CR completion including Long Term Management (LTM): 204506

CR Contamination Assessment

Contamination Assessment Overview

Environmental restoration activities include the IRP and MMRP. On Dec. 29, 2008, the Office of the Deputy Under Secretary of Defense for Installations and Environment [ODUSD (I&E)] issued an interim policy for Defense Environmental Restoration Program (DERP) eligibility that rescinded the 1986 eligibility date for the IRP and the 2002 eligibility date for the MMRP. This made many sites previously addressed in the Army's compliance-related cleanup (CC) program eligible for the DERP. Sites that are now eligible for the MMRP have been migrated from Army Environmental Database - Compliance-related Cleanup (AEDB-CC) and given the naming convention of other munitions response (MR) sites. The newly eligible non-MR type sites are considered to be installation restoration (IR) sites; however, the newly eligible sites are being coded as compliance restoration (CR) in AEDB-R to distinguish them from the original IR sites and IR metrics.

Due to ongoing BRAC construction, several sites have been opened as new, or (in the case of G-13), reopened due to the presence of contamination discovered during construction. It is anticipated that all of these sites will have immediate needs completed shortly (some already have).

CCBLDG1124 and CCBLDG3161 (petroleum sites) continue to utilize DPE systems to remediate the petroleum impacted soils and dissolved groundwater plume, while treating the groundwater and vapor through carbon treatment. Fort Belvoir is expecting to shut down the DPE remediation system at CCBLDG1124 at the end of March 2013. Then, post-operational monitoring and sampling will occur. CCBLDG3161 is estimated to have one more year of remediation through its DPE system.

The AS/SVE system continues to remediate the dissolved groundwater plume and treat the off-vapors at CCBLDG2209. This system is expected to be shut down in late March 2013.

The Main Post SWMUs make up the majority of the CR sites. These include various types of sites: landfills, sewage treatment plants, dump sites, POL storage areas, etc.

Additional sites which are not captured under this IAP include 89 "administratively closed" and 42 sites which received historical NFA. As these sites were listed within the Fort Belvoir RCRA Permit, Fort Belvoir was successful in achieving approval of this strategy (formally approved in June and August 2012, respectively). Although NFA was received, Fort Belvoir is currently evaluating each site to ensure that LUCs are documented where required.

Those sites which are itemized in this IAP are in various stages of investigation and closure and are documented under each individual site.

There are two CR sites located at FBNA. A risk assessment for site CC-MPS2009 is currently under USEPA review, and a FS will be awarded in FY14. CC-AOPC20, BNA was found during BRAC construction and is surrounded by IR sites FTBL-66 and FTBL-68. As a result, remediation at CC-AOPC20, BNA if needed will be managed under IR site FTBL-66.

Cleanup Exit Strategy

Due to the nature and number of sites, this information is best viewed on a site by site basis.

CR Previous Studies

	Title	Author	Date
1985			
	Prelim Phase I investigation -- BLDG 1124	USAEHA	JUL-1985
1986			
	GW Mont at B 1124	Dept of Army	JUL-1986
1988			
	Phase II RCRA FAc Ass at FTBL	AT Kearney	JUL-1988
1989			
	Area 600 Inspection and Permit Troubles	Commonwealth of VA	SEP-1989
1990			
	Haz Wast Permit App Vol 1 of 2, Rev 0 (HW Storage)	CH2MHill	JAN-1990
	Env Baseline Study ar EPG	USATHAMA	JAN-1990
	Draft Report, Phase III Collection of Env Field Data, EPG	FTBL Argnonne National Labs	FEB-1990
	Haz Waste Permit App for Dept of Army FTBL	Dept of Army	APR-1990
	Env Baseline Study, EPG, Vol II to Phase III Sampling	USATHAM	SEP-1990
	Soil Gas Survey and Sampling Plan Fire Training Pit, DAAF FTBL	US Army Eng District, Baltimore Eng Division, Geotech Engineering Branch	SEP-1990
	Env. Baseline Study at EPG Vol I, Scope Def.	USATHAMA	SEP-1990
1991			
	Federal Facilities Compliance Agreement Doc/Correspondence	Various	MAR-1991
	Haz Materials Inform System (HMIS) printours, Vol II	Unknown	MAY-1991
	Tank Investigations Bldgs 190, 677, 788, 1116, 1146, 1197, 1949, 2034, 2041	Dewberry and Davis	JUN-1991
	FTBL SWMU Study Photographs	CH2MHill	DEC-1991
1992			
	SWMU Study	CH2MHill	JAN-1992
	Interim Hydrogeologic Study Report DAAF Fire Train Sites	Directorate of Engineering and Housing	JAN-1992
	Removal Action EPG	International Tech Corp	FEB-1992
	Prelim Assessment Report for Addendum	ACOE	MAR-1992
	Virginia Waste Mgmt Act and RCRA, 3 Volumes	Dept of Army	APR-1992
	URADS/UXO Survey Conducted at EPG	International Tech Corp	MAY-1992
	Personnel Training Program of Haz Waste Mgmt	Unknown	JUN-1992
	Virginia Waste Mgmt Act and RCRA, revision, 3 volumes	Dept of Army	JUN-1992
	SWMU Study Appendix D Draft RFA Report	AT Kearny, Inc	JUL-1992
	Part B Permit VA7210000906 EPG	Commonwealth of Virginia	OCT-1992
1993			

CR Previous Studies

	Title	Author	Date
1993			
	Part B Permit VA7213720082 (Bldg 1490 and 2991 DRMO and UST...)	Commonwealth of Virginia	JAN-1993
	Haz Waste Mgmt Plan and Haz Waste Generation Survey	Bregman and Company Inc	FEB-1993
	Env Impact Statement	ACOE	MAR-1993
	Haz Waste Mgmt Permit FTBL, Main Post, VA 72131720082	Unknown	MAR-1993
	EPG, SWMU Closure Plans	Dewberry and Davis	OCT-1993
	Final Dioxin/Furan Report, Vol 1 Report and Data Summary	IT Analytical	DEC-1993
	Final Dioxin/Furan Report, Vol 1 Report and Data Summary, 7 Volumes	IT Analytical	DEC-1993
1994			
	GW Investigation: Compound 300 -- Totten Road	Vista Technologies	JAN-1994
	Phase I Petroleum Hydrocarbon Assesment at Dogue Creek Village	USAEHA	APR-1994
	FTBL SWMUs Vols 1 and 2	Dept of Army	JUL-1994
	Facility Investigation of Pile of Black Sandy Material near Bldg 383	Vista Technologies	JUL-1994
1995			
	Tompkins Basin Recreation Area, Dredging and Dredge Material Disposal Site DRAFT (Spe 94) and Final	Unknown	MAR-1995
	Phase II GW Quality Investig --Bldge 1124	USAEHE	SEP-1995
	Certificate of Closure, Bldg 625	Dewberry	DEC-1995
	Certificate of Closure, Bldg 627	Dewberry	DEC-1995
	Certificate of Closure, Bldg 632	Dewberry	DEC-1995
	Certificate of Closure, Bldg 633	Dewberry	DEC-1995
	Certificate of Closure, Bldg 634	Dewberry	DEC-1995
	Certificate of Closure, Bldg 363	Dewberry	DEC-1995
1996			
	Closure Plan UST Bldg 2034 Working Book	Unknown	JAN-1996
	Certificate of Closure, Bldg 714	Unknown	JAN-1996
	Closure Plans 600 Area Workbook	Unknown	JAN-1996
	Env Investigation at SWMU A3 DRMO Stump Dump Vol I and II	Dewberry	FEB-1996
	Closure Report Bldg 625	Dewberry	JUL-1996
	Closure Report Bldg 627	Dewberry	JUL-1996
	Closure Report Bldg 633	Dewberry	JUL-1996
	Closure Report Bldg 634	Dewberry	JUL-1996
	Closure Report Bldg 632	Dewberry	JUL-1996
	SWMU Closure Report, Waste Fuel Drum Storage Pad	Dewberry	DEC-1996

CR Previous Studies

	Title	Author	Date
1996			
	Closure Report Bldg 363	Dewberry	DEC-1996
	Closure Report Bldg 714	Dewberry	DEC-1996
1997			
	FTBL SWMU VOl II	Dept of Army	JAN-1997
	Closure Plan UST Working Book, Tanks 181, 714, 363, and 324	Unkown	JAN-1997
	Closure Plan, Battery Acid Trtmt Pit at B2021 Working Book	Unknown	JAN-1997
	Closure Plan DAAF Training Pit Working Book	Unkowns	JAN-1997
	Closure Plan, B 1957 Battery Acid Pit Working Book	Unkown	JAN-1997
	Closure Plan, Bldg 1957 Battery Acid Pit Working Book	Unknown	JAN-1997
	FTBL SWMU Vol III	DPW ENRD	JAN-1997
	Haz Waste Closure Sites, Letters, DOx, 30357A and Marina	Unkown	JAN-1997
	Closure Plan and Correspondence B 707 RCRA Closures DEQ 1997	Unknown	JAN-1997
	Tank Invest (B190, 677, 788, 1116, 1146,1197,1949, 2034, 2041, 2457, 2585, and Marina) Correspondence	Unknown	JAN-1997
	DROM Debris Landfill Exc Activity Final Report as Port of VDOT Beulah	Dept of Army	JUN-1997
	UST Activity Reports	Koester	AUG-1997
	Closure Report UST and Bldg 322	Dewberry	NOV-1997
	CLosrue Report, Battery Acid Disporal Pit 1957	Dewberry	NOV-1997
	Closrue Report, Containter Stora Area at B308	Dewberry	NOV-1997
	Closrue Report Fire Trng Area at DAA	Dewberry	NOV-1997
	Closrue Reprot AST and OWS at B1949/1950	Dewberry	NOV-1997
	Closure Report, Battery Acid Disp Pit at B1957	Dewberry	NOV-1997
	Closure Report, Battery Acid Trtmny Fac at B707	Dewberry	DEC-1997
	Closure Report Container Storage Area at Building 357A	Dewberry	DEC-1997
	Closure Rept Correspondence AST and OWS at 1959/1950	Unkown	DEC-1997
1998			
	Closure Report, Oil-Water Separator and Underground Storage Tank at Building 324	Dewberry	JAN-1998
	Closure Report, Underground Storage Tanks at Building 181	Dept of Army	JAN-1998
	Closure Report, Underground Storage Tanks at Building 1146	Dewberry	FEB-1998
	Closure Report, Underground Storage Tanks at Building 190	Dewberry	FEB-1998
	Closure Report Underground Storage Tanks at Building 1116	Dewberry	FEB-1998
	Closure Report AST at Building 677	Dewberry	FEB-1998

CR Previous Studies

	Title	Author	Date
1998			
	FFCA Closure Site Manifest Books 1 and 2	FTBL Directorate of Installation Support	MAR-1998
	Quarterly Groundwater Sampling Results (Feb 1998 and Oct 1997) at Buildings 2021 and 1957 and Davison Airfield	Dept of Army	APR-1998
	Fort Belvoir Solid Waste Management Units Volume IV	Dewberry	APR-1998
	Final Groundwater Well Survey and Assessment Data Summary Report	CDM	MAY-1998
	Groundwater Monitoring Well Closure Report Davison Army Airfield Fire Training Area	Law Engineering	JUN-1998
	Groundwater Flow Modeling of the Aquifer System at Fort Belvoir, Phase I	Dames and Moore	AUG-1998
	Quarterly Groundwater Sampling Results (June 1998) at Fire Training Area and Davison Airfield and VDEQ Correspondence	Dames and Moore	AUG-1998
1999			
	Quarterly Groundwater Sampling Results (June 1998) at Fire Training Area and Davison Airfield and VDEQ Correspondence	Dept of Army	JAN-1999
	Quarterly Groundwater Sampling Results (June 1998) at Battery Acid Pit	Dept of Army	JAN-1999
	Quarterly Groundwater Sampling Results (June 1998) at Fire Training Area and Davison Airfield and VDEQ Correspondence	Dept of Army	JAN-1999
	Quarterly Groundwater Sampling Results (Sept 1998) at Building 2021 and 1957 and Davison Army Airfield	Dept of Army	JAN-1999
	VDEQ GW Closure Correspondence 1997-1999	Dames and Moore	MAR-1999
	Quarterly Groundwater Sampling Results (Dec 1998) at Building 2021 and 1957 and Davison Army Airfield	Dewberry	MAR-1999
	Fort Belvoir Action Plans for Solid Waste Management Units Volumes I-VI	Dewberry	APR-1999
	Fort Belvoir Action Plans for 32 SWMUs, Volume 5	Dewberry	APR-1999
2002			
	Environmental Study Part II	Dewberry	JAN-2002
	Solid Waste Management Unit Geographic Information System	Dewberry	JUL-2002
	Closure Plan for HWMU- 1124	NA	SEP-2002
	RCRA Hazardous Waste Permit Application Main Post	Dewberry	SEP-2002
	Closure Plan HWMU 1124 Underground Storage Tank Building 01124	Dewberry	OCT-2002
	General Site History and Initial Abatement Measure Plan	Dewberry	OCT-2002
2003			
	Revised Closure Plan HWMU 1124 Underground Storage Tank Building 1124	Dewberry	APR-2003
	Draft Permit for Hazardous Waste Storage	Commonwealth of Virginia	NOV-2003
2004			
	Final Permit for Hazardous Waste Storage	VA Dept of Env Qual	OCT-2004

CR Previous Studies

	Title	Author	Date
2007			
	Final Environmental Investigation Summary Report PSA-2034	Tidewater, Inc.	MAY-2007
	Final Environmental Investigation Summary Report PSA-2009	Tidewater, Inc.	MAY-2007
	Final Environmental Investigation Summary Report PSA-2033	Tidewater, Inc.	MAY-2007
2008			
	A-26 EIP Addendum	Tetra Tech	JUL-2008
2009			
	Phase I RFI Rpt SWMU A-28	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU A-27	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU A-05	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU F-09/N-03	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU H-02	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU H-05	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU L-44	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU N-17	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU A-26	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU E-02	Tetra Tech	APR-2009
	Phase I RFI Rpt SWMU A-09/17	Tidewater	AUG-2009
	Phase I RFI Rpt SWMU A-08/16	Tidewater/SCS	AUG-2009
	Phase I RCRA Facility Investigation SWMU A-03	Tidewater	AUG-2009
	Phase I RCRA Facility Investigation SWMU A8/16	Tidewater	AUG-2009
	Phase I RCRA Facility Investigation SWMU A-09/17	Tidewater	AUG-2009
	Phase I RCRA Facility Investigation SWMU A-10	Tidewater	AUG-2009
	Phase I RCRA Facility Investigation SWMU A-13	Tidewater	AUG-2009
	Phase I RCRA Facility Investigation SWMU A-12	Tidewater	OCT-2009
	Phase I RCRA Facility Investigation SWMU N23	Tidewater	NOV-2009
	Phase I RCRA Facility Investigation SWMU E-03	Tetra Tech	DEC-2009
	Phase I RCRA Facility Investigation SWMU I02	Tetra Tech	DEC-2009
2010			
	Phase I RCRA Facility Investigation DRMO SWMUs A-14 A-29 H-01 L-01 L-35	Tidewater	MAR-2010
	Phase I RFI Rpt SWMU A-11	Tidewater/SCS	APR-2010
	Phase I RCRA Facility Investigation SWMU A-11	Tidewater	APR-2010
	CCBLDG1124 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	MAY-2010

CR Previous Studies

	Title	Author	Date
2010			
	CCBLDG2209 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	MAY-2010
	Phase II EIP SWMU A-05	ECC	JUL-2010
	Phase II EIP SWMU E14F06	ECC	JUL-2010
	Phase II EIP SWMU A-7/25	ECC	AUG-2010
	Phase II EIPSWMU A-06	ECC	SEP-2010
	Phase I RFI Rpt SWMU E-06	Tetra Tech	SEP-2010
	Phase I RFI Rpt SWMU E-14	Tetra Tech	SEP-2010
	Phase I RFI Rpt SWMU E-06	Tetra Tech	SEP-2010
	Phase I RCRA Facility Investigation SWMU E-06	Tetra Tech	SEP-2010
	Phase I RCRA Facility Investigation SWMU E-14	Tetra Tech	SEP-2010
	Phase I RCRA Facility Investigation SWMU F06	Tetra Tech	SEP-2010
	Phase I RCRA Facility Investigation SWMU L05	Tetra Tech	SEP-2010
	Phase II EIP SWMU A06	ECC	SEP-2010
	Phase II EIP SWMU A-11	ECC	SEP-2010
	Phase II RFI Rpt SWMU A-12	ECC	OCT-2010
	Phase II RFI Rpt SWMU A-26	ECC	OCT-2010
	Phase II EIP SWMU A-12	ECC	OCT-2010
	Phase II EIP SWMU A-26	ECC	OCT-2010
	Phase II EIP SWMU A-8/9	ECC	NOV-2010
	Phase II EIP SWMU A-8/9	ECC	NOV-2010
	Phase II EIP SWMU E06	ECC	NOV-2010
	Phase II EIP SWMU A-11	ECC	NOV-2010
2011			
	CCBLDG3161 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	JAN-2011
	Phase II RFI Addendum SWMU L-05	ECC	MAR-2011
	CCBLDG1124 - Annual Corrective Annual Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	MAY-2011
	CCBLDG2209 - Annual Corrective Action Monitoring Report	Mactec Engineering and Consulting, Inc., for Fort Belvoir	MAY-2011
	Administrative CLosure Report Vol. 2	Tetra Tech	OCT-2011
2012			
	CCBLDG3161 - Annual Corrective Annual Monitoring Report	AMEC Environment & Infrastructure, Inc., for Fort	FEB-2012

CR Previous Studies

Title	Author	Date
2012		
	Belvoir	
CCBLDG1124 - Annual Corrective Annual Monitoring Report	AMEC Environment & Infrastructure, Inc., for Fort Belvoir	MAY-2012
CCBLDG2209 - Annual Corrective Annual Monitoring Report	AMEC Environment & Infrastructure, Inc., for Fort Belvoir	MAY-2012

FORT BELVOIR

Compliance Restoration

Site Descriptions

Site ID: CC-A025
Site Name: Suspected Sanitary/Debris Landfill A

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals

Media of Concern: Groundwater

Phases	Start	End
RFA	198809	198909
CS	200610	200812
RFI/CMS	200909	201307
LTM	201307	204308

RIP Date: N/A

RC Date: 201307

SITE DESCRIPTION

SWMU A-25 is a forest clearing south of Kingman Road approximately 1200 ft southwest of the intersection of Kingman and Mulligan Roads. A 1988 RCRA Facility Assessment described an area in this vicinity as a sanitary landfill operated prior to 1940. No record of a release from this unit has been identified. A Fort Belvoir employee reported observing concrete curb/gutter and sidewalks from a USACE project on post disposed of at this unit in 1979 through 1980; the unit was reportedly covered with more than two ft of clean fill in the mid-1980s. During a 1988 site visit, there was evidence of surface dumping in several locations. During a 2005 Visual Site Inspection (VSI), the soil surface was bare and dry, and small amounts of fugitive dust were in the air. Multiple dump trucks were present at sites A-25 and A-07 (located to the north) depositing fill soil from ongoing construction projects. The nearest developed area identified during the 2005 VSI was located over 1000 ft to the west of the site. Two broad, forested stream valleys containing intermittent tributaries to Dogue Creek trended southward to the east and west of the clearing.

A 2008 Phase I RCRA Facility Investigation (RFI) determined the need for additional investigations to identify the full extent of the contamination at this site. In 2010, a Phase II RFI at the site was performed under a PBA contract (CCPBA@Belvoir); fieldwork has been completed. Organic compounds were sporadically detected above screening levels during the Phase II RFI investigation; no site-wide groundwater impacts were observed. Metals detected above screening criteria in groundwater included beryllium, cadmium, and manganese, although the risk evaluation revealed no concerns for human health. No further action (NFA) with respect to contamination was recommended for SWMU A-25. Fort Belvoir received formal approval from regulators (USEPA, Region III) for NFA required at SWMU A025 in the form of a letter on December 7, 2012. Since waste will be left in place, implementation of LUCs will be necessary to limit development at the site.

CLEANUP/EXIT STRATEGY

FTBL has received concurrence from the USEPA for NFA for CC-A025. This will be finalized under a Statement of Basis from the USEPA. A DD and LUCIP are currently being developed under CCPBA@Belvoir.

Site ID: CC-A04A23
Site Name: Former Coal Storage Area & PCB Spill Sit

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Polychlorinated Biphenyls (PCB), Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	201109	201309
DES	201401	201508
CMI(C)	201401	201508
CMI(O)	201510	204410

RIP Date: 201510

RC Date: 204410

SITE DESCRIPTION

SWMU A04, a former coal storage area, was combined with SWMU A23, the site of a one-time polychlorinated biphenyl (PCB) spill, due to the proximity of the sites. The joint site, SWMU A04/A23, is on South Post, south of building 607 and west of building 606. The site area, now known as the 21st Street Debris Collection Point, is currently used to sort construction debris and recyclable material for future off-site transportation and management.

In March 1979, two vandalized transformers that were on a concrete pad in the old coal storage yard (SWMU A-04) released approximately 197 liters of PCB containing dielectric transformer coolant onto a concrete pad and adjacent soil. The release was reported to the USEPA in 1979 and the site was addressed a few months later. The affected concrete was reportedly cleaned with solvents, and the affected soil was excavated and disposed of at an approved disposal site out of state. After the remediation action of soil removal, concentrations at the site were reportedly less than 50 milligrams per kilogram (mg/Kg), which was the USEPA, Region III action level at that time.

During the 2005 VSI, site CC-A04A23 was noted as an active recyclable material sorting area. The use of the site at the time included sorting recyclable materials in the former concrete storage enclosure until the debris was collected and transported off-site to be disposed. No coal was being stored at the coal storage yard site, and there was no evidence of the PCB spill. Field observations from the 2005 VSI noted two intermittent drainages at site CC-A04A23, which abut the north and south sides of a concrete pad and merge at the southeast corner of the pad to form a perennial drainage that flows to the southeast toward Gunston Cove, an inlet of the Potomac River. The surrounding area was observed as predominately forested with an area of abandoned building foundations at the top of the wooded slope to the north and a cluster of smaller active industrial buildings at the top of the wooded slope to the south.

Sampling efforts had been conducted in August 1980 and October 1980, which indicated that approximately 2,700 square ft of concrete surface and 120 linear ft of a drainage channel adjacent to the western side of the concrete slab had been affected by the PCB release. Approximately 23 samples were collected from the pad, adjoining soil, and the drainage ditch. Detected concentrations of the PCB congener, Aroclor 1260 ranged from one to 12,698 mg/Kg, which was above USEPA's action level of 50 mg/Kg for PCB concentrations at the time. Therefore, a remediation plan for site A-23 was determined and submitted to the USEPA in a letter dated Jan. 30, 1981.

The concrete slab was removed, and the adjoining area was excavated beginning in October 1982. The entire A-23 site was filled with two ft of clean earth material and stabilized with vegetation by June 1983. Remedial activities and site cleanup were conducted in accordance with the Clean Water Act of 1977 (PL-95-217) and the Toxic Substances Control Act (PL-94-469). The remediation report was completed and submitted to the USEPA in 1983.

In January 2013, FTBL submitted a Historical Investigation Summary for SWMU A-23 to USEPA, Region III. This summary included information on the background, site history and remediation activities that had occurred at the PCB spill site. In addition, a discussion of the fate and transport of PCB congener, Aroclor 1260 addressed the potential movement of the Aroclor at SWMU A-23. The summary report included FTBL's recommendation of NFA for SWMU A-23 due to the concrete and soil at the site had

already been remediated to concentrations of PCBs below 50 mg/Kg, and RCRA guidelines state that one-time spill sites do not constitute a SWMU site. FTBL is still awaiting concurrence from the USEPA on this recommendation.

CLEANUP/EXIT STRATEGY

FTBL is awaiting concurrence from USEPA for NFA with administrative LUCs for SWMU A-23. Upon concurrence from USEPA, FTBL plans to develop a DD and LUCIP for CC-A04A23. In addition, FTBL plans repairs to the cap and periodic cap inspections.

Site ID: CC-A05
Site Name: Road and Grounds/Land Mgmt Storage Area

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Pesticides, Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200902
RFI/CMS	200909	201305
DES	201302	201312
CMI(C)	201302	201408
CMI(O)	201408	202908
LTM	202910	204409

RIP Date: 201408

RC Date: 202908

SITE DESCRIPTION

SWMU A-05 was identified in the 1988 Resource Conservation and Recovery Act Facility Assessment (RFA) as a suspected unlined landfill which was in use prior to 1968. Historical aerial photographs (1968 to 1992) do not indicate evidence of landfill activity within the yard. In a 1992 SWMU study, the location of the landfill was determined to be a 400 by 600 ft area located in the northwest (NW) quarter of the yard. Site inspections mentioned the presence of surface debris which included abandoned 55 gallon drums, paint cans, tires, and construction debris. During a September 2005 VSI, the area was observed as being part of the Roads and Grounds/Land Management Yard. Most of the yard, including the site, is used as a storage and staging area for construction debris and is surfaced with concrete aprons, asphalt, loose gravel, and bare soil with only sparse vegetation.

A Phase I RFI was completed in 2009. Investigation results determined the presence of volatile organic compounds (VOCs) in groundwater. Based on the results of the 2009 RFI, a Phase II RFI was performed to determine the nature and extent of contamination at the site. The 2010/2011 Phase II RFI evaluated soil gas, subsurface soil, groundwater, surface soil, sediment, and surface water. Compounds detected above screening criteria during the Phase I and Phase II RFIs included tetrachloroethylene (PCE), methylene chloride, carbon disulfide, and pesticides in groundwater, PCE in subsurface soil, pesticides in surface soil, pesticides and PCE in sediment, carbon disulfide, barium, manganese and PCE in surface water. Human health risk and ecological screening found that there are potential concerns for human exposure at SWMU A-05. Thus, a corrective measures study (CMS) was funded for this site under CCPBA@Belvoir.

CLEANUP/EXIT STRATEGY

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is being prepared to address PCE in groundwater at this SWMU. Preferred alternative includes installation of Permeable Reactive Barrier, Long Term Monitoring of GW and SW, and LUCs.

Costs for the CMS and the first three years of the CMI(O) phase are funded under a PBA contract (CCPBA@Belvoir). The remaining out-years are tracked in the AEDB-R database under CC-A05.

Site ID: CC-A06
Site Name: Kingman Road Landfill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Other (Methane), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	200909	201307
LTM	201308	204308

RIP Date: N/A

RC Date: 201307

SITE DESCRIPTION

SWMU A-06 was identified as an inactive landfill of approximately seven acres south of Kingman Road and approximately 800 ft east of Woodlawn Road. The unit is bounded to the north by Kingman Road, to the south by Building 2310, to the east by a drainage swale, and to the west by the access road leading to Building 2310. A storm water management pond is located along the southern edge of the unit that drains into an unnamed tributary of Dogue Creek. No record of a release from this unit has been identified. There are no records of a liner or other release control installed prior to landfilling operations. Geotechnical borings, taken October through November 1983, indicated buried debris in the vicinity of the unit, north of Building 2310. Several previous encounters with fill material including waste debris such as wood, glass, fabric, metals, cinders, paper, and rubber have occurred. A non-specified odor was previously noted at several of the boring locations. Much of the landfill surface is occupied by a fenced compound of buildings and other structures. Previous reports have identified this area as a sanitary landfill that operated from the 1940s until it was closed in the 1950s.

Landfill gas and volatile organic compounds (VOCs) in groundwater were determined to be present during the Phase I RFI of the site. Therefore, Fort Belvoir performed additional investigations to determine the full extent of the contamination at this site. The Phase II RFI for SWMU A-06 was performed under a PBA contract (CCPBA@Belvoir); fieldwork has been completed. Risk results for groundwater at SWMU A-06 were above levels of concern; however, the constituents of potential concern are naturally occurring inorganics and do not reveal a release or impacts from the landfill. Based on the results of the Phase II RFI and human health and ecological risk screening, No Further Action (NFA) with administrative LUCs were recommended to ensure safety for personnel that access the site with respect to the landfill gas (methane) and surficial debris found at the site. Fort Belvoir received formal approval from regulators (USEPA), Region III) for NFA with LUCs at SWMU A-06 in a letter dated Dec. 7, 2012. The USEPA also recommended periodic landfill cap inspections to ensure that surface water runoff does not contribute to erosion of the landfill cap.

CLEANUP/EXIT STRATEGY

FTBL has received concurrence from the USEPA for NFA for CC-A06. This will be finalized under a Statement of Basis from the US EPA. A DD and LUCIP are currently being developed under CCPBA@Belvoir.

Site ID: CC-A07
Site Name: Mulligan Road Landfill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals

Media of Concern: Groundwater

Phases	Start	End
RFA	198701	198701
CS	198701	198706
RFI/CMS	200909	201307
LTM	201307	204308

RIP Date: N/A

RC Date: 201307

SITE DESCRIPTION

SWMU A-07 was identified by a 1988 Draft Phase II RCRA Facility Assessment as an inactive debris landfill several acres in size, located on north post approximately 1,000 ft southwest of the intersection of Kingman and Mulligan Roads. This site is located to the north of SWMU A-25. This area operated as a soil borrow pit until 1978. Between 1978 and 1986, the area was filled with debris from WWII wood buildings. The deepest area, along the west side of the site, is approximately 20 ft deep. Along the ridge line on the eastern side of the site, there was no excavation. Asbestos covered piping, dried lead paint, and numerous No. 2 heating oil tanks (250-gallon) were disposed in this site. The entire area is covered with two ft of clean fill. During the 1988 Draft Phase II RFA, partially buried construction debris was observed, particularly along the edges of the landfill. There is no record of a liner or other release control. Several rusted metal storage tanks and large pieces of concrete were reported in a swale that drains lands to the northeast. An Environmental Operations Review prepared in 1987 reported that low concentrations of five organic compounds were detected in groundwater samples collected from a downgradient monitoring well (KL-1). In September 2005 Fort Belvoir's Directorate of Public Works dumped fill material from an ongoing housing project on top of the landfill as a cap. The fill was then stabilized with a native grass seed mix. The unit is still used as a collection area for fill soil from on-post residential construction.

A 2008 Phase I RFI determined the need for additional investigation to identify the full extent of the contamination at this site. This investigation was completed in 2010. The Phase II RFI at the site was performed under a PBA contract (CCPBA@Belvoir); fieldwork has been completed. Organic compounds were sporadically detected above screening levels during the Phase II investigation; no site-wide groundwater impacts were observed. Metals detected above screening criteria in groundwater included beryllium, cadmium, and manganese, although the risk evaluation revealed no concerns for human health. NFA with respect to contamination was recommended for SWMU A-07. Fort Belvoir received formal approval from regulators (USEPA, Region III) for NFA required at SWMU A-07 via a letter dated Dec. 7, 2012. Since waste will be left in place, implementation of LUCs will be necessary to limit development at the site.

CLEANUP/EXIT STRATEGY

FTBL has received concurrence from the USEPA for NFA for CC-A07. This will be finalized under a Statement of Basis from the US EPA. A DD and LUCIP are currently being developed under CCPBA@Belvoir.

Site ID: CC-A08A16
Site Name: GW Village Landfill & Interceptor T

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Sediment, Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	200909	201305
DES	201203	201403
CMI(C)	201303	201503
CMI(O)	201510	204309

RIP Date: 201510

RC Date: 204309

SITE DESCRIPTION

SWMUs A-08 and A-16 are located on South Post near Dogue Creek and were combined to form CC-A08A16, due to their proximity. SWMU A-08 is a closed, inactive landfill that operated from the 1930s to 1956. SWMU A-16 is a two foot wide, 400 foot long limestone-filled trench installed in 1982 as a landfill gas mitigation measure on the western edge of the landfill.

During a site study of A-08 and A-16 conducted in 1982, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, radio nucleotides, and basic wet chemistry samples were taken and analyzed at Monitoring Well-01, which was installed during the study period. There were no detections of contamination, with the exception of trace levels of tetrachloroethane.

During a September 2005 VSI of A-08 and A-16, it was noted that the landfill surface was mowed near Mount Vernon Road, and that the eastern portion of the landfill surface supported a mixed forest of loblolly pines and successional hardwoods. The landfill gas trench (A-16) could be identified through the mowed grass. There was no discoloring to the gravel within the trench and no odors suggesting contamination were noticed. MW-01 was observed on the north side of the unit and a man-made, earthen berm was evident along the perimeter. Since A-16 is an active unit and does not meet the definition of a SWMU, regulators granted no further action to the interceptor trench in a letter dated Jan. 12, 2011.

VOCs and SVOCs in groundwater and VOCs in nearby surface water were detected during a 2008 Phase I RFI at Site A-08. Site A-08 was included in Fort Belvoir's 2010 Phase II PBA contract for main post SWMUs (CCPBA@Belvoir). Fieldwork is complete, but final approval of the Phase II RFI Report by regulators has not yet been received. The Phase II RFI identified numerous constituents above screening levels in groundwater and surface water, with the main concerns being elevated tetrachloroethylene (PCE) and trichloroethylene (TCE) in groundwater. For this reason, a CMS was recommended. The CCPBA@Belvoir contract included costs for a CMS and options for conducting Remedial Action, Construction [RA(C)], and RA(O) for three years post-CMS at the site. The CCPBA@Belvoir will cover the RA(C) phase and two years of the RA(O) phase through FY15, although five-year reviews were not funded under CCPBA@Belvoir; however, long term groundwater and landfill gas monitoring, along with LUC implementation and five-year reviews, will be necessary.

CLEANUP/EXIT STRATEGY

Results from the Phase II RFI, human health and ecological risk screening, recommend a CMS SWMU A-08. While the 2009 Phase I Investigation Summary Report recommends NFA for the interceptor trench (SWMU A-16).

Costs for the CMS and remediation will be funded under a PBA and is pending award under CMS PBA, while the remaining out-year amounts are tracked under this site.

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is being prepared to address PCE

Site ID: CC-A08A16
Site Name: GW Village Landfill & Interceptor T

in groundwater at this SWMU. Preferred alternative includes installation of Permeable Reactive Barrier, Correction of Landfill Cap, long-term monitoring of GW and SW, and LUCs; however, it should be noted that additional sampling of GW is needed to account for possible seasonal fluctuations at this site.

Site ID: CC-A09
Site Name: Markham School Landfill & Intercept

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	200909	201305
DES	201203	201403
CMI(C)	201303	201503
CMI(O)	201510	204309

RIP Date: 201510

RC Date: 204309

SITE DESCRIPTION

SWMUs A-09 and A-17 are located on South Post near Dogue Creek (south of SWMUs A-08 and A-16) and were combined to form SWMU A-09/A-17, due to their proximity. SWMU A-09 (Markham School Landfill) is a closed, inactive landfill that operated between the 1930s and 1956. SWMU A-17 is a 1.5-ft wide by 270-ft long gravel-filled trench installed as a mitigation measure to vent landfill gas generated from SWMU A-09. The trench was installed in 1981 and is still in use. The trench is located on the southern edge of the landfill, east of the Markham School building.

Due to the close proximity of Markham School to SWMU A-09, a methane monitoring system was installed inside the school in 1980 and wired to the Fort Belvoir Fire Department. A foundation air flushing and vent system was installed in 1982, although it was unclear as of 2012 whether the system was still functional. Follow-up inquiries regarding the status of the vent system were being pursued as of the time of preparation of this memorandum.

During a study conducted in 1982 at site A-09/A-17, two monitoring wells were installed, MW-02 and MW-03. VOCs, metals, radio nucleotides, and basic wet chemistry samples were taken and analyzed at Monitoring Well (MW)-02. Samples taken at MW-02 and MW-03 were analyzed for the presence of semi-volatile organic compounds (SVOCs). There were no detections of contamination with the exception of tetrachloroethane (PCE) at 100-200 micrograms per liter (ìg/ L) and trace levels of naphthalene at MW-02.

During a September 2005 VSI, the Markham School grounds on the western part of the landfill were neat, landscaped, and free of debris. Areas of the eastern edge of the landfill are steep and eroding, possibly contributing sediment to Dogue Creek and its adjacent wetlands. The interceptor trench, SWMU A-17, was easily visible through the landscaped sports fields. There was no discoloring to the gravel and no unusual odors were noted. Since A-17 is an active unit and does not meet the definition of a SWMU, regulators granted no further action to the interceptor trench in a letter dated Jan. 12, 2011.

VOCs and SVOCs in groundwater and VOCs in nearby surface water were detected during a 2008 Phase I RFI at site A-09. Site A-09 was included in Fort Belvoir's 2010 Phase II RFI PBA contract for main post SWMUs (CCPBA@Belvoir). Fieldwork is complete, but final approval of the Phase II report by regulators has not yet been received. The Phase II investigation identified numerous constituents above screening levels in groundwater and surface water, with the main concerns being elevated PCE and trichloroethylene (TCE) in groundwater. For this reason, a CMS was recommended. The CCPBA@Belvoir contract included costs for a CMS and options for conducting RA(C) and RA(O) for three years post-CMS at the site.

CLEANUP/EXIT STRATEGY

Costs for the CMS and remediation will be funded under a PBA and is pending award under CMS PBA, while the remaining out-year amounts are tracked under this site.

Site ID: CC-A09
Site Name: Markham School Landfill & Intercept

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is being prepared to address PCE in groundwater at this SWMU. Preferred alternative includes installation of Permeable Reactive Barrier, Correction of Landfill Cap, long-term monitoring of GW and SW, and LUCs; however, it should be noted that additional sampling of GW is needed to account for possible seasonal fluctuations at this site.

Site ID: CC-A11
Site Name: POE Road Landfill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA	197306	197309
CS	197306	198906
RFI/CMS	200909	201305
DES	201301	201408
CMI(C)	201301	201408
CMI(O)	201402	204308

RIP Date: 201408

RC Date: 204308

SITE DESCRIPTION

SWMU A-11, Poe Road Landfill, was first identified in a 1988 Draft Phase II RCRA Facility Assessment as an approximately 20-acre, unlined landfill that operated between 1967 and 1977. Prior to the landfill, the area was used as a small arms firing range during WWII. A ridgeline along the western portion of the site was used as a backstop, while the firing points were on the eastern side, along Poe Road. In 1977, municipal waste operations were moved to Cullum Woods and debris waste operations were moved to Theote Road Debris Landfill. This site is located within an active training area. Sample results from a November 1973 solid waste survey indicated that leachate from the landfill had impacted Accotink Creek and surrounding groundwater. At the time, there were two natural springs that flowed through the landfill, on the northeast and southeast sections of the site. The southeastern spring leads to a drainage ditch and then into the Accotink Creek. During the September 2005 VSI, the landfill cover appeared to be physically stable without significant surface erosion. No stained soils or unusual odors were noted.

VOCs and metals in groundwater and surface water were detected during the Phase I RFI; therefore, Fort Belvoir performed additional investigations to determine the full extent of the contamination at this site. This site was included in Fort Belvoir's 2010 Phase II PBA contract. Phase II RFI data indicated that monitoring of VOCs, SVOCs and metals in groundwater, landfill gas (LFG) monitoring and capping over a portion of the landfill will be needed. For this reason, FTBL developed a CMS for a path forward under the CCPBA@Belvoir. LUCs will also be required.

CLEANUP/EXIT STRATEGY

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is being prepared.

Costs for the CMS and the first three years of the CMI(O) phase are funded under a PBA contract (CCPBA@Belvoir). The remaining out-years are tracked in the AEDB-R database under CC-A11.

Site ID: CC-A12
Site Name: Accotink Landfill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Polycyclic Aromatic Hydrocarbons (PAH), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	200909	201305
DES	201301	201408
CMI(C)	201301	201408
CMI(O)	201402	204308

RIP Date: 201408

RC Date: 204308

SITE DESCRIPTION

SWMU A-12 is an inactive landfill, located in the southwest area of Fort Belvoir and operated between 1956 and 1973. Historical records indicate that the landfill accepted construction and municipal waste. Historical aerial photographs show four large tanks with berms along Poe Road on either side of the landfill entrance. The tanks, only identified in photographs from 1953, are believed to have been used as a petroleum storage area (PSA). The pine plantations on both sides of the entrance are the extent of the sanitary fill. The center section was filled with debris. Accotink Bay and wetlands were filled with debris until ordered to stop by Congressional inquiry. Currently the landfill is covered with a layer of soil and supports old field vegetation and planted stands of loblolly pine and black locust. The landfill is within the Accotink Bay Wildlife Refuge and is traversed by several unpaved hiking trails. There is no visual evidence of the storage tanks (which are being addressed under site CC-MP1).

VOCs and metals in groundwater and surface water were detected during a Phase I RFI; therefore, Fort Belvoir performed additional investigations to determine the full extent of the contamination at this site. This site was included in Fort Belvoir's 2010 Phase II PBA contract. Phase II RFI data detected target analyte list (TAL) metals, VOCs, and polycyclic aromatic hydrocarbons (PAHs) in groundwater that exceeded screening criteria. The human health risk evaluation found that there were no potential concerns for residential or industrial exposure to surface or subsurface soil. Thus, FTBL developed a CMS for a path forward under the CCPBA@Belvoir. LUCs will also be required.

CLEANUP/EXIT STRATEGY

Based on the results from the Phase II RFI, human health and ecological risk screening, a CMS is being prepared.

Costs for the CMS and the first three years of the CMI(O) phase are funded under a PBA contract (CCPBA@Belvoir). The remaining out-years are tracked in the AEDB-R database under CC-A12.

Site ID: CC-A14
Site Name: DRMO Salvage Storage Area

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	198809	198909
CS	199606	199607
RFI/CMS	200803	201501

RIP Date: N/A

RC Date: 201501

SITE DESCRIPTION

AEDB-R site FTBL-39 may have included SWMU A14. SWMU A14 was subsequently entered into the AEDB-CC as CC-A14 before being transferred to AEDB-R as CC-A14.

The Defense Reutilization and Marketing Office (DRMO) Salvage Yard identified as SWMU A-14 is an outdoor unit consisting of mostly bare soil within a fenced area measuring approximately 500 ft by 300 ft. The site surrounds a complex of light industrial bldgs, designated Bldgs 2990, 2991, and 2993, on North Post at Fort Belvoir. Installation records state material previously stored on the surface at this site included scrap metal, vehicles, scrap cable and wire, equipment, appliances, furniture, and tires. The site was identified as a SWMU in the 1988 RFA (Kearney, 1988). Installation records further indicate that stains from spillage and/or leakage from items stored on the ground were noted in the area. The RFA document also noted batteries stored on bare ground; however, the stains and batteries were not noted when the site was visually inspected in 1992. Stained soil was discovered by field personnel after removing a pile of scrap cable stored in the northwest corner of the DRMO area. Consequently, Fort Belvoir collected 14 soil samples. Although elevated levels of lead were reported, no soil removal or remediation actions were recommended.

Currently, the fenced area is used as the North Post Golf Course maintenance facility. Several dozen recreational vehicles (RVs) are parked in rows on the bare ground at SWMU A-29, which is located within the SWMU A-14 site area. No visual evidence of releases from the RVs was observed, and no storage of batteries or other hazardous materials described in earlier reports was observed at the time of RFI phase I investigation.

The 2008 phase I RFI at SWMU A-14 was combined with that at SWMU A-29 given the overlap of the two sites. Though combined with A-29, A-14 is recommended for NFA as no significant contamination associated with the non-landfill portion was detected. Methane was detected above the lower explosive limit during the investigation, though detections are thought to be the result of landfill activities and not activities associated with SWMU A-14. Furthermore, given the age of the landfill and the distance to the occupied bldg, Fort Belvoir concluded that monitoring of the existing LFG probes would be sufficient to protect human health and the environment.

Based on the findings of this investigation, Fort Belvoir is currently seeking NFA at SWMU A14. Since remaining potential concerns at the site pertain to landfill gas and the fact that waste was left in place at the landfill portion of the site, future costs for other actions in this area (landfill gas monitoring, administrative LUC) will be tracked under site CC-A29 (which refers to the landfill portion of CC-A14). Therefore, Response Complete has been selected for site CC-A14 to close out this site in the database.

CLEANUP/EXIT STRATEGY

Site ID: CC-A24
Site Name: Former DPDO Storage Area- PCB Spill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Polychlorinated Biphenyls (PCB)

Media of Concern: Soil

Phases	Start	End
RFA	197904	198108
CS	200803	200903
RFI/CMS	201109	201310
DES	201401	201407
CMI(C)	201401	201508
CMI(O)	201510	204410

RIP Date: 201510

RC Date: 204410

SITE DESCRIPTION

In March 1979 Fort Belvoir reported to the USEPA that a release of dielectric transformer coolant occurred because of improper storage of transformers at the DPDO storage yard. The DPDO storage yard is along Kingman Road, directly south of Building 1131. The storage yard was described as a four-acre fenced area that was used as a storage area for various equipment and supplies managed by the DPDO. The two transformers released approximately 163 liters of PCB coolant to the surrounding soil. According to historical records, approximately 1,600 square ft (0.04 acres) of soil were affected by this release. Affected soil was excavated from the site and replaced with off-site fill.

Following the excavation more than 385 soil samples were collected across the DPDO storage yard during multiple rounds of soil sampling. The soil sampling at the site began sometime toward the first half of 1980. The site was divided into 20 quadrants, approximately 100 ft by 100 ft. Of the 20 quadrants, five in the western side of the site were found to contain concentrations of the PCB congener, Aroclor 1260, from 47 to 97.1 mg/Kg in the first two ft of soil. These detected concentrations were close to or greater than 50 mg/Kg which was USEPA's regulatory action level for PCBs at the time.

In 1988 the USEPA contracted AT Kearney to perform a Phase II RFA at FTBL. The RFA identifies CC-A24 as a former DPDO storage area PCB spill site. The unit was the site of a PCB spill because of improperly stored transformers.

Between 1993 and 1999, FTBL contracted Dewberry to prepare action plans. CC-A24 was in Volume II of the action plans, dated December 1993. CC-A24 is described as a fenced area approximately four acres that is covered by hardwoods and scotch pines. The site is immediately south of Building 1131 along Kingman Road. There were no markers to indicate the exact location of the PCB spill, and evidence of stressed vegetation was not observed. The action plan for CC-A24 recommended NFA because the soil at the site had already been remediated to detected concentrations of PCBs below 50 mg/Kg.

During a 2005 VSI, CC-A24 was observed to be enclosed by a 10-ft tall chain-link fence. The fenced area was reportedly unused and supported a dense thicket of pines and successional hardwoods. The site is abutted to the north by Building 1131, to the south by a light industrial area with what appeared to be explosives storage magazines, to the west by undeveloped forestland, and to the east by Theote Road. In January 2013, FTBL submitted a Historical Investigation Summary for CC-A24 to USEPA, Region III. This summary included information on the background, site history and remediation activities that had occurred at the PCB spill site. In addition, a discussion of the fate and transport of PCB congener, Aroclor 1260 addressed the potential movement of the Aroclor at CC-A24. The summary report included FTBL's recommendation of NFA for CC-A24 because the concrete and soil at the site had already been remediated to concentrations of PCBs below 50 mg/Kg, and RCRA guidelines state that one-time spill sites do not constitute as a site. FTBL is still awaiting concurrence from the USEPA on this recommendation.

CLEANUP/EXIT STRATEGY

Site ID: CC-A24
Site Name: Former DPDO Storage Area- PCB Spill

FTBL is awaiting concurrence from USEPA for NFA with administrative LUCs for SWMU A-24. Upon concurrence from USEPA, FTBL plans to develop a DD and LUCIP for CC-A24. In addition, FTBL plans repairs to the cap and existing fence as well as periodic cap inspections.

Site ID: CC-A26
Site Name: Suspected Sanitary Landfill B

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals

Media of Concern: Groundwater

Phases	Start	End
RFA	198809	198909
CS	200610	200812
RFI/CMS	200909	201307
LTM	201308	204308

RIP Date: N/A

RC Date: 201307

SITE DESCRIPTION

SWMU A-26, identified as an inactive landfill, is bounded to the north by Pohick Road and to the south and east by an unnamed tributary to Accotink Creek. The area is approximately 1000 ft by 700 ft. The landfill was originally identified on old installation site maps (1930s to 1940s) and on a post map dated 26 March 1958. No evidence of filling activities has been found, only surficial debris resulting from troop training activities. During the 1980s, the USACE Water Ways Experiment Station surveyed this area, collecting samples from soil borings and groundwater wells, which were also installed. No evidence of waste disposal was found. During a February 1988 RCRA Facility Assessment site visit, evidence of surface dumping was found along the edges of the unit, with a high concentration around the eastern slope near the tributary. No evidence of a release, such as free-product, staining, dead vegetation, or unusual odor, was noted around the debris. During a September 2005 VSI, it was noted that the site supported deciduous forest. Visible remnants of surface debris were found along the edges of the unit with a high concentration around the eastern slope near the tributary. No evidence of stained soils, stressed vegetation, odors, or other indicators of contamination was observed. Debris included five-gallon containers, pipes, hoses, 55-gallon drums, and concrete. Except for historic post site maps, documentation regarding a landfill in this area has not been located. Action plans for cleanup at this site were developed under Fort Belvoir's 1993 and 1999 SWMU action plans, but were never implemented.

Pesticides and metals in groundwater and surface water were detected during a Phase I RFI; therefore, Fort Belvoir performed additional investigations to determine the full extent of the contamination at this site. This site was included in Fort Belvoir's 2010 Phase II PBA contract (CCPBA@Belvoir). During the Phase II RFI, methane was not detected in gas probes. Elevated metals were detected in soil, groundwater, and surface water, though some detections may be at least partially attributable to natural conditions. The Phase II RFI report concluded that the investigation results supported a determination of no further action (NFA) with respect to contamination. Fort Belvoir received formal approval from regulators (USEPA, Region III) for NFA required at SWMU A-26 with LUCs via a letter dated Jan. 25, 2013. Since waste will be left in place, implementation of LUCs will be necessary to limit development at the site.

CLEANUP/EXIT STRATEGY

FTBL has received concurrence from the USEPA for NFA for CC-A26. This will be finalized under a Statement of Basis from the USEPA. A DD and LUCIP are currently being developed under CCPBA@Belvoir.

Site ID: CC-A29
Site Name: Mason Pit Debris Fill

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Other (LFG)

Media of Concern: Other (LFG)

Phases	Start	End
RFA	198809	198909
CS	200803	201003
RFI/CMS	201003	201501
CMI(C)	201501	201510
CMI(O)	201510	201908
LTM	201910	204310

RIP Date: 201510

RC Date: 201908

SITE DESCRIPTION

SWMU A29 is an inactive landfill located on North Post south of Telegraph Road and west of Woodlawn Road. Installation records note that the site was formerly a five-acre sand and gravel pit that operated in the 1950s and that was later used as a storage yard for salvage material by the Defense Reutilization and Marketing Office (DRMO). The southern boundary is parallel to the north side of Building 2990 (golf course maintenance building). The remaining portion extends to the north, east, and west into the surrounding wooded areas. The unit was identified in both the 1988 Draft Phase II RCRA Facility Assessment and the 1992 SWMU Study.

Historical information was reviewed and did not suggest that the northern half of the DRMO complex was used for the disposal of any type of debris; rather, the records indicated that the area north of Building 2991 was used as a sand and gravel quarry/open pit during the 1950s and possibly into the 1960s. A Fort Belvoir representative stated that the 11th Engineering Battalion filled the quarry with WWII era building demolition debris that originated from WWII era wooden barracks, administration buildings, and associated infrastructure. A VSI report detailing a site visit in September 2005 noted that the site was within a fenced area north of Building 2990 and was used for storage of recreational vehicles. No evidence of a former landfill was identified. The report noted that SWMU L35, Former Transformer Spill Site, was located within the boundaries of SWMU A29.

SWMU A29 is located within the area of site CC-A14, which refers to SWMU A14, the DRMO Salvage Yard. Both sites, in addition to SWMU L35 and two other SWMUs located within the SWMU A14 area, were investigated as part of a 2008 Phase I RFI. No visual evidence of releases was observed, and no storage of batteries or other hazardous materials described in earlier reports was observed at the time of the 2008 Phase I RFI investigation. Methane was detected above the lower explosive limit during the investigation at Building 2990, although given the age of the landfill and the distance to the occupied building, Fort Belvoir concluded that monitoring of the existing landfill gas (LFG) probes would be sufficient to protect human health and the environment. The entire DRMO salvage yard, including A29, was recommended for No Further Action with respect to contamination; however, due to landfill gas detections near occupied Building 2990, Fort Belvoir committed to voluntarily monitoring landfill gas at the existing landfill gas probes during two sampling events over the course of one year and to establishing an administrative land use control at the site (see attached Draft Final Phase I RFI, March 2010). This cost estimate was prepared using the assumption that additional LFG will be detected that will necessitate monitoring for LFG. This assumption is based on additional review conducted of the Phase I Report and knowledge that enclosed structures (i.e. offices) are present within the warehouse. This information has prompted the development of a contract to assess indoor air at this location. Based on a similar review at a similar site, extended monitoring may be necessary to gather representative data during variations in weather.

CLEANUP/EXIT STRATEGY

Site ID: CC-A29
Site Name: Mason Pit Debris Fill

Based on the findings of this investigation, FTBL is currently seeking NFA at the site; however, FTBL will take the following voluntary actions:
1. Add a LUC for the site into the GIS to document that waste management plans and health and safety precautions may be needed if development of the landfill site is considered;
2. Voluntarily monitor methane levels at the existing LFG probes and inside the adjacent structure (Bldg 2990) during two sampling events over the course of a year.

Costs for these actions have been included in the estimate for site CC-A14; therefore, no estimate has been prepared for this site.

Site ID: CC-AOPC-20 BNA
Site Name: Contaminated Soil and Groundwater

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	200811	200812
CS	200901	200903
RFI/CMS	201010	201506
IRA	200906	201210

RIP Date: N/A

RC Date: 201506

SITE DESCRIPTION

This site was identified at FBNA during BRAC related utility construction, adjacent to FTBL-66 and FTBL-68, when construction workers observed soil staining and petroleum odors while excavating pits for directional boring of utility conduits. Initial sampling results indicated that soils above the USEPA Region III screening levels are present. Additionally, groundwater samples taken from this area indicate the presence of petroleum contamination.

Soils above soil screening levels for groundwater protection standards are present and are isolated; however, due to installation of critical infrastructure, remaining contaminated soils may need to be left in place.

Additional work at this site will be conducted under FTBL-66.

CLEANUP/EXIT STRATEGY

An FS in planned for site FTBL-66 in FY14, which will inlclude this site.

Site ID: CC-E01
Site Name: Bldg 3232 Waste POL & Empty Drum Storage

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	200903	201412

RIP Date: N/A

RC Date: 201412

SITE DESCRIPTION

SWMUs E-01 and L-12 were identified as waste POL and empty drum storage areas, respectively, and were combined due to proximity. Historical accounts and photographs indicate that both units were located on the northwest side of building 3232. SWMU L-12 was reportedly removed in 1990; E-01 was reportedly still in use in 1991, but removed by 1997.

The 1988 Draft Phase II RFA describes SWMU E-01 and L-12 as an area used to store POL. During an October 2005 VSI, a rusty and stained drum rack, which was used to store drums on their sides, remained at this site, though no drums were present. The site visit confirmed that the POL area no longer exists and that a new storage area is located east of Building 3232. In 2009 a Phase I investigation was performed and reported that SVOCs were detected above residential screening levels in soil. Based on negotiations with the USEPA, Fort Belvoir has determined that additional sampling (one boring with two samples) is required to confirm Fort Belvoir's original recommendation of NFA.

CLEANUP/EXIT STRATEGY

The 2009 Phase I Draft RFI reported that SVOCs were detected above residential screening levels in soil. Based on these results, NFA was recommended; however, Fort Belvoir is currently awaiting regulator confirmation for NFA and the implementation of Administrative LUCs. FTBL will also draft a DD for this site. No CTC estimate was performed as no additional costs will be required until FTBL receives regulator response.

If a Phase II investigation is required, FTBL will investigate the nature and extent of contamination in soil and groundwater.

Site ID: CC-E06
Site Name: Building T-1423 Waste POL Storage Area

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Semi-volatiles (SVOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	200908	201307

RIP Date: N/A

RC Date: 201307

SITE DESCRIPTION

This site is located south of Building 1430 and west of Building 1423. SWMU E-06 was identified as a POL storage area, but the exact start-up date is unknown for this unit. During the 2005 VSI, this site was contained in a fenced-in area near an AST. According to the report components of the waste POL storage had been removed and an active AST had been put in its place.

A Phase I environmental investigation was performed during 2008. Investigation results identified the presence of SVOCs in soils. Based on the results of the Phase I investigation, FTBL determined the need for further investigation with regards to contamination in soil and groundwater. A Phase II investigation was performed and found no impacts to groundwater and soil contamination was below site-specific risk, based on a formal risk assessment. This site was then recommended for NFA based on the completed risk assessment.

CLEANUP/EXIT STRATEGY

A Phase I environmental investigation was performed during 2008. Investigation results identified the presence of SVOCs in soils. Based on the results of the Phase I investigation, FTBL determined the need for further investigation with regards to contamination in soils and groundwater. This site is included in the FTBL 2010 main post Phase II PBA (CCPBA@Belvoir), and was recommended for NFA based on Risk Assessment; however, regulatory approval of risk assessment has not yet been received. Under the assumption that NFA will be approved, future work for this site is anticipated to include site closeout documentation only (internal Army DD, and Administrative LUCs), the costs of which have been included in this site.

Site ID: CC-E14
Site Name: Building 1939 Waste POL Storage Area

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	200903	201308
LTM	201403	204309

RIP Date: N/A

RC Date: 201308

SITE DESCRIPTION

The start-up date for CC-E14 is unknown, but it is believed that POL storage activities at this site were discontinued sometime between 1988 and 1991. The site was located near the edge of the cleared lot, west of where Building 1939 formerly stood and north of a storage shed, located along a fence. It was used for the storage of used POL and may have been used for management of waste solvents prior to the installation of a Safety-Kleen® station at the existing motor pool. The surrounding fenced lot is currently used to park trailers. No containers were found at the location during a 1997 site visit. There was a visible dark stain (approximately 10 ft by 15 ft) found at the location. There was no record of a release from this unit except for the stain. During a September 2005 VSI, a faint stain on the pavement (approximately 10 ft by 6 ft) was observed.

In 2008 Fort Belvoir hired Tetra Tech to perform a Phase I. Results indicated the presence of SVOCs above remedial end points. The contaminates include: benzo(a)anthracene, benzo(a)pyrene, benzo(b)flouranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene, and napthalene. Following these results, a Phase II investigation was performed and the contractor found no impacts to groundwater and soil contamination was below risk based concentrations, based on a formal risk assessment. This site was then recommended for NFA based on the completed risk assessment and FTBL is awaiting approval from the USEPA for this recommendation.

CLEANUP/EXIT STRATEGY

The results of the Phase II investigation recommended NFA for this site based on risk assessment; however, regulatory approval of risk assessment has not yet been received. Under the assumption that NFA will be approved, future work for this site is anticipated to include administrative LUCs.

Site ID: CC-F06
Site Name: Building 1906 Aboveground Waste POL Tank

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	199808	199909
CS	200803	200903
RFI/CMS	200912	201308

RIP Date: N/A

RC Date: 201308

SITE DESCRIPTION

SWMU F-06, located on North Post near the intersection of Gunston Road and Goethels Road, was identified as an AST, used to store waste oil. It is located between Bldgs 1906 and 1905 in the Military Police Motor Pool, near SWMU E-14. The original unit, removed in late-1994, was a 250-gallon steel tank for used motor oil, solvents, and sludge and set on bare ground. There were no berms on the 10 by eight ft site and stains on the tank and ground indicated spillage on both sides of the tank. It is unknown when this site was first used, but the tank was replaced with a used oil collection tank and secondary containment system in 1994 and was located approximately 75 ft north of the original tank site.

During an October 2005 VSI, it was noted that the tank had been removed. The site had been covered with grass and there appeared to be a berm or mound at the previous location.

FTBL completed a phase I environmental investigation at this site in 2009. SVOCs, specifically naphthalene were identified above industrial RBCs. Based on the results of the phase I investigation, FTBL determined the need for further investigation with regards to soils and GW. The phase II investigation for this site is included in FTBL's 2010 Main Post Phase II PBA (CCPBA@Belvoir), while future CTC requirements will be tracked under CC-E14 as these two sites have been combined due to proximity/similarity.

ALL future activities/costs will be covered under site E14.

CLEANUP/EXIT STRATEGY

Site ID: CC-L09
Site Name: Former Coal Storage Area In-Ground Concr

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Sediment, Soil, Surface Water

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	201109	201307
CMI(C)	201402	201407

RIP Date: N/A

RC Date: 201407

SITE DESCRIPTION

A 1992 CH2M Hill SWMU study noted that the unit was located behind former building 607 and directly next to former building 601. The area was reported to contain concrete dividers, two tanks, light poles, mulch and trash. The unit was vegetated at the time of the investigation and any releases from the unit were unknown. In 2008 a Phase I RFI was performed and soil was tested for metals, SVOCs and VOCs. With the exception of arsenic none of the detected analytes exceeded the USEPA Region III standards in soil. Arsenic, lead and mercury were detected in sediment above industrial standards and five SVOCs were detected above residential or industrial screening levels. Finally six metal analytes, one VOC and three SVOCs exceeded MCL water standards in surface water. FTBL is awaiting regulator concurrence on future path forward with this site

CLEANUP/EXIT STRATEGY

Recommendations based on the investigation note that while impact to the environment was not present, and that therefore NFA is appropriate, that to ensure contaminates within the structure are properly handled that an interim removal action is appropriate to properly remove the structure. While formal regulator acceptance has not yet been provided, this CTC includes requirements for the above mentioned removal. FTBL will also draft a DD for this site upon formal acceptance of NFA by regulators.

Site ID: CC-L45
Site Name: Sewage Treatment Plant #1

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Pesticides, Semi-volatiles (SVOC)

Media of Concern: Groundwater, Sediment, Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	200803	201501
CMI(C)	201403	201604
CMI(O)	201605	204505

RIP Date: 201605

RC Date: 204505

SITE DESCRIPTION

CC-L45 is an inactive wastewater treatment plant, with the exception of Building 687 which is currently used as a lift station operated by American Water. There are two large clarifiers, six large settling basins, two siphon tanks, a large trickling filter area and four large sludge drying beds. A concrete chlorine contact chamber is located on the extreme southwest corner of the site and a 12-inch cast iron pipe runs from the chamber into the Potomac River. The wastewater treatment plant became operational in 1919 and underwent a number of upgrades until its deactivation in 1981. According to the contractor's remarks reported in the October 2005 VSI report, this former Sewage Treatment Plant is overgrown with vegetation and metal portions are corroded. At the time of inspection water was seen flowing through an exposed pipe on the property, destination unknown.

Results of a 2008 Phase I investigation exhibited that VOCs did not exceed Risk-based Concentrations (RBCs) or Maximum Containment Level (MCL) values in soil, groundwater or sediment samples. Bis(2 ethylhexyl) phthalate was the only SVOC above the screening level and was detected in the groundwater. Arsenic and lead exceeded the RBC screening levels in sediment samples. Pesticides exceeded RBCs in soil and sediment and MCLs in groundwater. Based on these findings further investigation is recommended to determine the extent of impacts at the sewage treatment facility. A Phase II investigation is expected to be completed within FY13.

CLEANUP/EXIT STRATEGY

A CMS, removal of sludge from settling basins and groundwater monitoring with LUCs are planned for CC-L45.

Site ID: CC-MP1
Site Name: Former POL Area at Accotink Landfil

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
ISC	200907	200907
CAP	200912	201402

RIP Date: N/A

RC Date: 201508

SITE DESCRIPTION

This site is located near Poe Road and was identified as a potential Area of Concern (AOC) during a Phase I RFI at CC-A12. Historic aerial photographs of this site show the presence of ASTs. The A-12 Phase I RFI determined the presence of petroleum contamination in the vicinity of the historical tanks. The Phase II investigation confirmed the presence of petroleum contamination at MP1. Fort Belvoir, based on initial discussions with regulators, is planning to address this site under the petroleum program, though formal concurrence is pending.

CLEANUP/EXIT STRATEGY

This is a zero cost site until resolution is reached.

Site ID: CC-MP10
Site Name: 21st Street Luquid Dump Site

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Semi-volatiles (SVOC)

Media of Concern: Sediment, Surface Water

Phases	Start	End
RFA	201301	201303
RFI/CMS	201403	201503
CMI(C)	201504	201604
CMI(O)	201605	204205

RIP Date: 201605

RC Date: 204205

SITE DESCRIPTION

On Jan. 18, 2012, approximately 250 gallons of sediment/grit and colored liquid were discovered at an unnamed tributary to Gunston Cove, located downstream of the 21st Street debris collection site. Upon investigation it was found that the Fort Belvoir Base Operations Contractor had collected and discharged contents from a floor drain at Building 3145 (a hanger located on Davison Army Airfield) at the rear of the Fort Belvoir 21st Street debris collection site. This individual discharge and the subsequent fish kill were addressed under VDEQ Incident Report No. 2012-N-1900. Although this action was determined to be a one-time release from the contractor, further site assessment (such as identification of distressed vegetation) indicated that historical releases may have occurred at this location. Therefore, sampling of this site was conducted. A comparison of sample results to screening criteria indicated that an impact to the environment occurred at this site. Based on these results, primary contaminants of concern include metals in surface water, and SVOCs and metals in sediment. Of particular note was the presence of Poly Aromatic Hydrocarbons (PAHs) in sediment as these suspected carcinogens are known to persist in the environment.

CLEANUP/EXIT STRATEGY

Continue monitoring until sampling results indicate levels are below compliant levels.

Site ID: CC-MP2
Site Name: 1124 PCE detections

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Other (PCE)

Media of Concern: Groundwater

Phases	Start	End
RFA	201006	201008
RFI/CMS	201302	201408
CMI(C)	201410	201508
CMI(O)	201606	204506

RIP Date: 201606

RC Date: 204506

SITE DESCRIPTION

This site is a region that is located in an industrial area on South Post near Accotink Bay. The need for investigation at this site developed when the presence of PCE in groundwater was discovered. It is unknown whether the presence of this contamination was from multiple source areas, or whether one major source exists. It is also unknown whether the contamination consists of small individual plumes, multiple sites, or whether they are connected; however, it has been determined in the best interest of the Army to ensure that all of this information be handled together as one site (MP-2).

Sampling of mixed media at SWMU A-05 indicated concentrations of PCE and various other potential contaminants. SWMU A-05 is separated by topography into two major areas, upper and lower. PCE contamination in the lower portion is being handled under site CC-A05 and is separated from the upper portion by sample results; however, PCE contamination in the upper portion suggests that a larger (regional) PCE plume could potentially exist. During evaluation of a regional storm water pond, three sets of groundwater monitoring wells (one shallow, one deep per set) were installed north of 1124. PCE was detected in two of the three deep wells. Additional indication of a regional PCE concern stem from sample results from wells installed upgradient of Theote Landfill (site CC-A02).

Based on these results, additional investigation may be warranted to define the nature and extent of the PCE contamination. Daughter product evaluation should be included in any PCE study to ascertain the degree to which natural attenuation is occurring and to assess concerns that may arise should a build-up of daughter products such as vinyl chloride occur.

Currently, this site is being scoped for a new PBA for investigation of sites MP2, MP5, and MP9.

CLEANUP/EXIT STRATEGY

Costs for RFI/CMS were funded for FY13 and are being scoped under upcoming Investigation PBA. It is planned that remediation activities are likely for this site, based on levels of contamination.

Site ID: CC-MP5
Site Name: Recycle Center Contaminated Soil

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	201009	201010
RFI/CMS	201201	201510

RIP Date: N/A

RC Date: 201510

SITE DESCRIPTION

This site is located off Pohick Road near Building 1089. After initial grading for a manhole along this site, a tar like substance was found. Sample results showed total petroleum hydrocarbons at 778 ppm and dimethyl phthalate at 1190 ug/kg. The construction contractor was required to remove around the area and backfill with clean soil to ensure manhole/pipeline did not have contaminated material along side. Once the material was removed, the construction contractor took confirmation samples which indicated that contamination is still present outside of the construction limit of disturbance.

Currently, this site is being scoped for a new PBA for investigation of sites MP2, MP5, and MP9.

CLEANUP/EXIT STRATEGY

Cleanup/Exit Strategy will be determined once investigation results are evaluated.

Site ID: CC-MP9
Site Name: Old Dump

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
RFA	201108	201110
RFI/CMS	201201	201510

RIP Date: N/A

RC Date: 201510

SITE DESCRIPTION

This site was discovered in summer 2010. The site is north of a steep ravine and opposite of CC-A05. The dump site is wooded and consists of surface debris including rusted gas tanks, a car door, old pipe, tires, tubing, metal scrap, and an axle from a car. It is unknown at this time whether any buried debris exists within the site.

Currently, this site is being scoped for a new PBA for investigation of sites MP2, MP5, and MP9.

CLEANUP/EXIT STRATEGY

Cleanup/Exit Strategy will be determined once investigation results are evaluated.

Site ID: CC-MPS2009
Site Name: PSAs 2009, 2033, and 2034

STATUS

Regulatory Driver: CERCLA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Groundwater

Phases	Start	End
PA	198909	199009
SI	199601	199705
RI/FS	200609	201506
IRA	199601	199705

RIP Date: N/A

RC Date: 201506

SITE DESCRIPTION

This site consists of three historical petroleum releases (Petroleum Storage Areas 2009, 2033, and 2034). The sites were listed in a January 2002 Environmental Study, Part II, which summarized the findings of a 2001 site reconnaissance and document review. The original USTs were investigated and closed in 1996 and 1997, and FTBL subsequently performed biannual groundwater sampling over six sampling events, and then requested site closure from VDEQ.

In 2005, BRAC legislation identified FTBL as a gaining installation for approximately 20,000 civilians and service members; 8,500 of which were to be transferred to FBNA. A second project for the Fairfax County Parkway (Parkway) extension was planned concurrently with the BRAC construction. In response to the BRAC announcement, the USEPA issued a RCRA 3013 UAO in 2005 to Engineer Proving Ground, now referred to as FBNA, requiring the Army to investigate potential releases of hazardous substances. FTBL had begun investigation activities at this site in 2006 under the UAO. As a result of the BRAC construction, the site was covered with gravel and used for parking lots. New sewer and water lines run through the site to support the temporary administrative space used for construction.

Between 2006 and 2008, FTBL performed several phases of investigations to determine the full nature and extent of the contamination. Results from the investigations show little or no residual soil contamination present; however, several groundwater plumes remain. COCs are mainly petroleum related with minimal halogenated compounds.

Many of the investigation wells were abandoned as a result of the BRAC construction.

In November 2011, FTBL submitted a risk assessment to the USEPA for review. Concurrence is anticipated for spring 2013. Optional CLINs for groundwater MNA were included under FTBLs 2009 MR PBA (MR PBA@ Fort Belvoir); however, a FS had not previously been conducted. Due to the extensive impact of BRAC construction and the need for a FS, additional funding will be required in FY14 for limited RI and FS. FTBL plans to modify the PBA to remove the MNA options.

CLEANUP/EXIT STRATEGY

Feasibility studies will be funded in the first quarter of FY14. Groundwater monitoring and LUCs are anticipated as the final remedy.

Site ID: CC-N23
Site Name: Post Dump

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC)

Media of Concern: Groundwater

Phases	Start	End
RFA	199108	199207
CS	200803	200812
RFI/CMS	200909	201307
LTM	201307	204308

RIP Date: N/A

RC Date: 201307

SITE DESCRIPTION

SWMU N-23 is an inactive landfill located on South Post, north of the current Recycling Area. The former landfill area is bounded by Pohick Road to the south, railroad tracks to the east, and an unnamed stream to the northwest. The Recycling Center at Building 1089 and a yard waste composting area southeast of the building are currently active. The unit was identified from a 7 July 1943 map, although dates of operation are unknown. Two terraces were identified during a 1992 Site Inspection (SI) and appeared to be landfill cells. Two active seeps were observed at the base of the northwest face of the lower slope. The northern and larger seep flowed into a small ravine leading towards the unnamed stream, while the smaller seep near the middle of the northwest slope face flowed over land. The active seeps are considered evidence of active potential releases from the unit. No information is known about the design and construction of the landfill unit or about the waste disposed there. Given the age of the unit, it is unlikely that there is a liner or other release control in place. At the time of the September 2005 VSI, the site was being used primarily for wood chipping, mulching, and composting. The inspection report noted that the lower terrace was located around the perimeter of the site and differs in elevation from the second, higher terrace by 10 ft. Debris including old drums and steel trusses was observed scattered throughout the site. Two active seeps were observed at the base of the northwest face of the lower slope during the SI. The observations of the seeps were identical to the 1992 descriptions.

SVOCs and metals in groundwater and surface water were detected during a Phase I RFI; therefore, Fort Belvoir performed additional investigations to determine the full extent of the contamination at this site. This site was included in Fort Belvoir's 2010 Phase II PBA contract (CCPBA@Belvoir). Based on the Phase II RFI, a human health and ecological risk assessment indicated there are no potential concerns for residential or industrial exposure to soil, groundwater, sediment, and surface water. There were no indications of significant releases of harmful constituents, with the exception of select metals (manganese, cobalt, and thallium) in groundwater and polycyclic aromatic hydrocarbons (PAHs) in groundwater at a single monitoring well location downgradient of the landfill. The Phase II RFI report concluded that the investigation results supported a determination of no further action (NFA) with respect to contamination. Fort Belvoir received formal approval from regulators (USEPA, Region III) for NFA required at SWMU N-23 with LUCs via a letter dated Jan. 25, 2013. Since waste will be left in place, implementation of LUCs will be necessary to limit development at the site.

CLEANUP/EXIT STRATEGY

FTBL has received concurrence from the USEPA for NFA for CC-N23. This will be finalized under a Statement of Basis from the USEPA. A DD and LUCIP are currently being developed under CCPBA@Belvoir.

Site ID: CCBLDG1124
Site Name: Bldg 1124 - Vehicle Fueling Facility

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Other (Vapor), Soil, Surface Water

Phases	Start	End
ISC	198507	198509
INV	198608	200203
CAP	200204	200707
IMP(C)	200803	200810
IMP(O)	200810	201303
LTM	201303	201312

RIP Date: 200810

RC Date: 201303

SITE DESCRIPTION

In the late-1970s a new 15,000-gallon gasoline tank ruptured spilling all 15,000 gallons into the subsurface. In the mid-1980s, 15,000-gallons of waste oil leaked from an old UST. This tank was permitted under RCRA Part A Permit. Clean closure from this spill was approved by the VDEQ in late-1980s.

A CAP was submitted and approved by the VDEQ in July 2007. The FTBL ENRD constructed a DPE remediation system to treat soil, groundwater and vapor contamination. The DPE system became operational September 2008. When all remedial end points have been met, post operational monitoring will take place before the ENRD may petition for official case closure with the VDEQ.

The VDEQ required an air permit for the site. The permit was approved by the VDEQ Air Division on Sept. 11, 2008.

Through the third quarter of 2012, LPH was not detected at any monitoring wells. Dissolved contamination levels remain elevated for three site groundwater wells for analytes TPH-GRO, TPH-DROs, and BTEX. Approximately 79 gallons of LPH have been recovered by the system since system startup in September 2008.

CLEANUP/EXIT STRATEGY

Anticipating case closure in FY14. If achieved, decommissioning at this site to include well and line abandonment and removal of remediation system.

Site ID: CCBLDG2209
Site Name: Bldg 2209/2217- Former Military Barracks

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Other (Vapor), Soil

Phases	Start	End
ISC	199609	199702
INV	199702	199710
CAP	199711	200703
IMP(C)	199901	200711
IMP(O)	200807	201303
LTM	201303	201312

RIP Date: 200807

RC Date: 201303

SITE DESCRIPTION

Until 1995, this site contained 62 military barracks buildings. Each bldg had its own No. 2 heating oil UST providing heat. All of the USTs associated with these buildings were removed in 1995, when the barracks were demolished. Since that time, the site was an open field and paved area, and then the motorpool and office bldg were constructed at the subject site in 2001.

In March 2000, 400 cubic yards of petroleum impacted soils were removed from the site during intrusive construction activities. The site had a mobile DPE well for several years. It removed all of the vapor fuel problems, but the LPH still exist. Once the LPH is less than 0.01 ft, FTBL will request case closure from the State regulators.

This site is located in the installation's 2200 area, formerly military barracks, near the intersection of Goethals Road and Foster Road. A motor pool and an Army Reserve Center are currently at the site. Heating oil USTs that served the barracks were removed in early-1995. Several releases from these tanks occurred, and were assigned VDEQ PC No.96-3053.

Site characterization field activities were performed in September and October 1996, and an SCR dated Feb. 24, 1997 was submitted to the VDEQ. A total of 30 soil borings and 10 temporary groundwater monitoring points were installed during these field activities. The SCR identified residual phase hydrocarbons in the soil with TPH concentrations exceeding 100 mg/kg near old demo barracks Bldg 2217 (just east of the new reserve center). In addition, dissolved phase TPH in groundwater was detected at concentrations exceeding one mg/L near Bldg 2217. An LPH thickness of 0.05 and 1.36 ft was detected in two site monitoring wells, near Bldg 2217.

A CAP for the subject site was submitted to the VDEQ in March 1998. The approved CAP recommended periodic vacuum truck enhanced fluid recovery (EFR) events for LPH recovery at the site. The EFR were to occur for a year and then future activities would be evaluated. Asymptotic recovery or LPH <0.01 ft was required for site closure; no post-operational monitoring was required. The VDEQ assigned CAP No.119 to this facility.

Between the fourth quarter of 1998 and the second quarter of 1999, EFR events occurred. LPH thicknesses ranged from zero ft to 1.01 ft. A CAP Addendum was submitted in November 1999. It provided guidelines for the management of petroleum-impacted soils excavated throughout the Bldg 2200 area during construction activities, which were proposed at that time. Presently, the site still has greater than 0.01 ft of LPH in two on-site monitoring wells.

A CAP for the site was submitted and approved by the VDEQ in July 2007. An AS/SVE was installed in early 2008 and the system started during May 2008.

Through the third quarter of 2012, none of the wells contained LPH. LPH has not been gauged in any wells since March 2012. Approximately 41 gallons of LPH has been recovered by the SVE system between second quarter 2008 and third quarter 2012.

Site ID: CCBLDG2209
Site Name: Bldg 2209/2217- Former Military Barracks

CLEANUP/EXIT STRATEGY

Case closure is anticipated in FY14. If achieved, decommissioning at this site to include well and line abandonment and removal of remediation system.

Site ID: CCBLDG3161
Site Name: Bg 3161- Davison Army Airfield Fuel Yard

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Volatiles (VOC)

Media of Concern: Groundwater, Other (Vapor), Soil

Phases	Start	End
ISC	199911	200012
CAP	200101	200108
IMP(C)	200111	200202
IMP(O)	200202	201310
LTM	201310	201408

RIP Date: 200202

RC Date: 201310

SITE DESCRIPTION

The fueling terminal formerly had two 10,000-gallon JP-4 USTs. The two former 10,000-gallon USTs were removed from the site on June 22, 1994.

Petroleum-impacted soil excavated during the old tank removals was segregated for off-site disposal; approximately 100 cubic yards of petroleum-impacted soils were removed from the former tank pit. This former tank basin was then backfilled with clean fill material. The TPH concentrations were detected in several grab soil samples collected beneath the former USTs at concentrations up to 1,600 mg/kg, which exceeds the VDEQ release reporting limit of 100 mg/kg. The site was assigned PC No.2000-3092 by the VDEQ.

In August 1999, additional petroleum-contaminated soils were encountered. The JP-8 fuel release contaminated both the soil and the groundwater at this site. Approximately 130 tons of soil was removed from the site during this time. As a result, the site was assigned PC 2000-3092 by the VDEQ. Field activities, in preparation of the development of the CAP, took place between January 2001 and May 2001. The CAP was submitted to the VDEQ, approved by the VDEQ in August 2001, and assigned CAP tracking No.242. A DPE remediation system was installed at the subject site in February 2002, based on the approved CAP. System start-up was initiated on Feb. 15, 2002.

The most notable change observed at Bldg 3161 during 2004 was the thickness of LPH in the newly installed recovery well R3161-4. A new recovery well was installed on April 29, 2004 to address the increasing LPH thickness in the vicinity of monitoring well W3161-3. On July 20, 2004 LPH were detected on the water table in R3161-4 at a thickness of 7.35 ft. Subsequent trenching and plumbing in the third quarter of 2004 connected this new well to the DPE system. R3161-4 was initiated on Aug. 19,2004, and is primarily responsible for the significant increase in LPH recovered by the system during the third and fourth quarters of 2004. The addition of recovery well R3161-4 has been very effective in decreasing LPH thickness in monitoring well W3161-3.

Through the third quarter of 2012, four wells contained LPH. The four wells with LPH contained free-product ranging from 0.02 - 0.28 ft of product atop the water table. Dissolved contamination levels remain elevated at seven site wells for analytes TPH - DRO, and BTEX. 2,991 gallons of LPH have been recovered from the site since system start-up in February 2002.

CLEANUP/EXIT STRATEGY

Case closure is anticipated in FY14. If achieved, decommissioning at this site to include well and line abandonment and removal of remediation system.

Site ID: CCPBA@Belvoir
Site Name: PBA@IR and CR Belvoir

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Other (Methane), Pesticides, Polycyclic Aromatic Hydrocarbons (PAH), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	201001	201001
RFI/CMS	201004	201309
CMI(C)	201302	201409
CMI(O)	201302	201608

RIP Date: 201409

RC Date: 201608

SITE DESCRIPTION

This site is a cumulative site to address funding of PBA contracts for multiple SWMUs within AEDB-R (CR Program). Since these are associated with specific contract costs, only costs for applicable CLINs are included. Out-year costs for the individual CR sites will be addressed at the site level.

Previous funding was used to address the completion of RFI (under a separate contract) at the following main post SWMUs: CC-A05, A06, A07, A0816, A09, A11, A12, A025, A26, E06, E14, F06 L05, MP1, and N23. This RFI PBA includes the following contract line item numbers (CLINs):
1004AA -- PMP and QASP
1004BA -- RFI at E14
1004BB -- RFI at F06
1004BC -- RFI at A05
1004BD -- RFI at A025
1004BE -- RFI at A06
1004BF -- RFI at A07
1004BG -- RFI at A08A16
1004BH -- RFI at A09
1004BJ -- RFI at A11
1004BK -- RFI at A12
1004BL -- RFI at A26
1004BM -- RFI at N23
1004BN -- RFI at E06
1004BP -- RFI at L05
1004BQ -- RFI at MP1

Current/future year costs associated with the PBA site will be used to address CMS activities for SWMUs (CR sites) outlined in the below CLIN list. Please note that this CMS PBA is pending award. CLINs associated with these activities are:

CLIN010 A05 Option - Road and Grounds/Land Management Storage Area - RIP in two years
CLIN011 A08/09 Option - GW Village landfill and Interceptor Trench - RIP in two years
CLIN012 A11 Option - Poe Road Landfill - RIP in two years
CLIN013 A12 Option - Accotink Landfill - RIP in two years
CLIN014 A05 Option - Road and Grounds/Land Management Storage Area - RAO/LTM/Exit/Rampdown for one year
CLIN015 A05 Option - Road and Grounds/Land Management Storage Area - RAO/LTM/Exit/Rampdown for one year
CLIN016 A05 Option - Road and Grounds/Land Management Storage Area - RAO/LTM/Exit/Rampdown for one year
CLIN017 A08/09 Option - RAO/LTM/Exit/Rampdown for one year
CLIN018 A08/09 Option - RAO/LTM/Exit/Rampdown for one year
CLIN019 A08/09 Option - RAO/LTM/Exit/Rampdown for one year
CLIN020 A11 Option - RAO/LTM/Exit/Rampdown for one year
CLIN021 A11 Option - RAO/LTM/Exit/Rampdown for one year

Site ID: CCPBA@Belvoir
Site Name: PBA@IR and CR Belvoir

CLIN022 A11 Option - RAO/LTM/Exit/Rampdown for one year
CLIN023 A12 Option - RAO/LTM/Exit/Rampdown for one year
CLIN024 A12 Option - RAO/LTM/Exit/Rampdown for one year
CLIN025 A12 Option - RAO/LTM/Exit/Rampdown for one year
CLIN026 A05 Option - Road and Grounds/Land Management Storage Area - Site Closeout
CLIN027 A08/09 Option - Road and Grounds/Land Management Storage Area - Site Closeout
CLIN028 A11 Option - Site Closeout
CLIN029 A12 Option - Site Closeout

CLEANUP/EXIT STRATEGY

N/A -- based on PBA contracts.

Site ID: CC_E10
Site Name: Building 328 Waste POL Storage Area

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL)

Media of Concern: Soil

Phases	Start	End
RFA	198809	198909
CS	200803	200903
RFI/CMS	201212	201407

RIP Date: N/A

RC Date: 201407

SITE DESCRIPTION

The site is located on South Post in the building 300 area. This inactive unit is a 300-gallon aboveground waste POL tank resting on a 10-ft by 20-ft by two-inch concrete pad with berm. There is a 70-gallon underground catch basin used for spill containment. The tank was active from 1985 until about 2002 and has historically been used to manage used POL generated at building 328. The existing concrete pad, catch basin, and steel tank were added to the site after the 1988 Phase II RCRA Facility Assessment. Around 2002, the concrete pad, catch basin and aboveground tank were removed by a Research and Development contractor. FTBL is currently evaluating a path forward with regulators.

CLEANUP/EXIT STRATEGY

This site is currently being evaluated by regulators, but as NFA was recommended, no further costs are planned for this site.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
CC-A18	Active Coal Storage Wstwtr Trmt Unit 1	201212	USEPA Letter dated December 7, 2012 approving RFI Phase I Report recommending NFA.
CC-A19	Active Coal Storage Wstwtr Trmt Unit 2	201212	USEPA letter dated December 7, 2012 approving RFI Phase I Report recommending NFA.
CC-A28	Non-Authorized Debris Landfill	201212	USEPA letter dated July 30, 2010 approving RFI Phase I Report recommending NFA.
CC-DAAF1	DAAF Flight Tower	201111	Formal NFA letters are pending; however we have received preliminary acceptance from regulators on the investigation report which recommends NFA.
CC-G13	B1453 Former USTs & Related Contam.	201108	US EPA approved NFA in letter dated September 21, 2012.
CC-L05	Bldg 307 Concrete Apron Disposal Area	201212	USEPA Letter dated December 7, 2012 approving RFI Phase I and Addendum recommending NFA.
CC-MP3	Arts & Crafts Cntr Petroleum Cont.	201202	In a letter from the Virginia Department of Environmental Quality, dated February 9, 2012, CC-MP3 is considered case closed.
CC-MP4	Contaminated Soil at 9th and Gunsto	201202	In a letter from the Virginia Department of Environmental Quality, dated February 9, 2012, CC-MP4 is considered case closed.
CC-MP6	1425 Pipeline Contamination	201212	USEPA letter dated December 7, 2012 approving petroleum contaminated soil removal at MP-6 Building 1425 Electric Utility Construction Area.
CC-MP7	Future OSEG Facility	201109	VA DEQ letter dated May 24, 2012.
CC-MP8	AAFES Shoppette Project	201212	USEPA Letter dated December 7, 2012 approving MP-8 AAFES Shoppette disposal pit soil excavation summary report.
CCBLDG305	Bldg 305 - Research & Development Center	201010	VA DEQ letter dated October 29, 2010.
CCBLDG773	Former Building 773	201004	VA DEQ letter dated August 16, 2007.

CR Schedule

Date of CR Inception: 197306

Past Phase Completion Milestones

1973	
RFA	(CC-A11 - POE Road Landfill)
1981	
RFA	(CC-A24 - Former DPDO Storage Area- PCB Spill)
1985	
ISC	(CCBLDG1124 - Bldg 1124 - Vehicle Fueling Facility)
1987	
RFA	(CC-A07 - Mulligan Road Landfill)
CS	(CC-A07 - Mulligan Road Landfill)
1989	
RFA	(CC-A025 - Suspected Sanitary/Debris Landfill A, CC-A04A23 - Former Coal Storage Area & PCB Spill Sit, CC-A05 - Road and Grounds/Land Mgmt Storage Area, CC-A06 - Kingman Road Landfill, CC-A08A16 - GW Village Landfill & Interceptor T, CC-A09 - Markham School Landfill & Intercept, CC-A12 - Accotink Landfill, CC-A14 - DRMO Salvage Storage Area, CC-A18 - Active Coal Storage Wstwtr Trmt Unit 1, CC-A19 - Active Coal Storage Wstwtr Trmt Unit 2, CC-A26 - Suspected Sanitary Landfill B, CC-A28 - Non-Authorized Debris Landfill, CC-A29 - Mason Pit Debris Fill, CC-E01 - Bldg 3232 Waste POL & Empty Drum Storage, CC-E06 - Building T-1423 Waste POL Storage Area, CC-E14 - Building 1939 Waste POL Storage Area, CC-L05 - Bldg 307 Concrete Apron Disposal Area, CC-L09 - Former Coal Storage Area In-Ground Concr, CC-L45 - Sewage Treatment Plant #1, CC_E10 - Building 328 Waste POL Storage Area)
CS	(CC-A11 - POE Road Landfill)
1990	
PA	(CC-MPS2009 - PSAs 2009, 2033, and 2034)
1992	
RFA	(CC-N23 - Post Dump)
1996	
CS	(CC-A14 - DRMO Salvage Storage Area)
1997	
IRA	(CC-MPS2009 - PSAs 2009, 2033, and 2034)
SI	(CC-MPS2009 - PSAs 2009, 2033, and 2034)
ISC	(CCBLDG2209 - Bldg 2209/2217- Former Military Barracks)
1998	
INV	(CCBLDG2209 - Bldg 2209/2217- Former Military Barracks)
1999	
ISC	(CCBLDG305 - Bldg 305 - Research & Development Center)
RFA	(CC-F06 - Building 1906 Aboveground Waste POL Tank)
2001	
CAP	(CCBLDG3161 - Bg 3161- Davison Army Airfield Fuel Yard, CCBLDG773 - Former Building 773)
ISC	(CCBLDG3161 - Bg 3161- Davison Army Airfield Fuel Yard, CCBLDG773 - Former Building 773)
2002	
IMP(C)	(CCBLDG3161 - Bg 3161- Davison Army Airfield Fuel Yard)
INV	(CCBLDG1124 - Bldg 1124 - Vehicle Fueling Facility)
2003	
IMP(C)	(CCBLDG773 - Former Building 773)
2005	
INV	(CCBLDG305 - Bldg 305 - Research & Development Center)

2007	
CAP	(CCBLDG1124 - Bldg 1124 - Vehicle Fueling Facility, CCBLDG2209 - Bldg 2209/2217- Former Military Barracks, CCBLDG305 - Bldg 305 - Research & Development Center)
IMP(O)	(CCBLDG773 - Former Building 773)
2008	
IMP(C)	(CCBLDG2209 - Bldg 2209/2217- Former Military Barracks, CCBLDG305 - Bldg 305 - Research & Development Center)
2009	
IMP(C)	(CCBLDG1124 - Bldg 1124 - Vehicle Fueling Facility)
CS	(CC-A025 - Suspected Sanitary/Debris Landfill A, CC-A04A23 - Former Coal Storage Area & PCB Spill Sit, CC-A05 - Road and Grounds/Land Mgmt Storage Area, CC-A06 - Kingman Road Landfill, CC-A08A16 - GW Village Landfill & Interceptor T, CC-A09 - Markham School Landfill & Intercept, CC-A12 - Accotink Landfill, CC-A18 - Active Coal Storage Wstwtr Trmt Unit 1, CC-A19 - Active Coal Storage Wstwtr Trmt Unit 2, CC-A24 - Former DPDO Storage Area- PCB Spill, CC-A26 - Suspected Sanitary Landfill B, CC-A28 - Non-Authorized Debris Landfill, CC-AOPC-20 BNA - Contaminated Soil and Groundwater, CC-E01 - Bldg 3232 Waste POL & Empty Drum Storage, CC-E06 - Building T-1423 Waste POL Storage Area, CC-E14 - Building 1939 Waste POL Storage Area, CC-F06 - Building 1906 Aboveground Waste POL Tank, CC-L05 - Bldg 307 Concrete Apron Disposal Area, CC-L09 - Former Coal Storage Area In-Ground Concr, CC-L45 - Sewage Treatment Plant #1, CC-N23 - Post Dump, CC_E10 - Building 328 Waste POL Storage Area)
ISC	(CC-MP1 - Former POL Area at Accotink Landfil)
RFA	(CC-AOPC-20 BNA - Contaminated Soil and Groundwater)
2010	
RFA	(CC-DAAF1 - DAAF Flight Tower, CC-MP2 - 1124 PCE detections, CC-MP4 - Contaminated Soil at 9th and Gunsto, CCPBA@Belvoir - PBA@IR and CR Belvoir)
IMP(O)	(CCBLDG305 - Bldg 305 - Research & Development Center)
LTM	(CCBLDG773 - Former Building 773)
ISC	(CC-G13 - B1453 Former USTs & Related Contam., CC-MP3 - Arts & Crafts Cntr Petroleum Cont.)
RFI/CMS	(CC-A28 - Non-Authorized Debris Landfill)
CS	(CC-A29 - Mason Pit Debris Fill)
2011	
RFA	(CC-MP5 - Recycle Center Contaminated Soil, CC-MP6 - 1425 Pipeline Contamination, CC-MP8 - AAFES Shoppette Project)
LTM	(CCBLDG305 - Bldg 305 - Research & Development Center)
ISC	(CC-MP7 - Future OSEG Facility)
IRA	(CC-G13 - B1453 Former USTs & Related Contam., CC-MP3 - Arts & Crafts Cntr Petroleum Cont., CC-MP4 - Contaminated Soil at 9th and Gunsto, CC-MP7 - Future OSEG Facility)
INV	(CC-G13 - B1453 Former USTs & Related Contam., CC-MP7 - Future OSEG Facility)
2012	
INV	(CC-MP3 - Arts & Crafts Cntr Petroleum Cont.)
RFA	(CC-MP9 - Old Dump)
RFI/CMS	(CC-DAAF1 - DAAF Flight Tower, CC-MP4 - Contaminated Soil at 9th and Gunsto)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

CR Schedule

Final RA(C) Completion Date: 201604

Schedule for Next Five-Year Review: N/A

Estimated Completion Date of CR at Installation (including LTM phase): 204506

FORT BELVOIR CR Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
CC-A025	Suspected Sanitary/Debris Landfill A	LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A04A23	Former Coal Storage Area & PCB Spill Sit	DES						
		CMI(C)						
		CMI(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A05	Road and Grounds/Land Mgmt Storage Area	DES						
		CMI(C)						
		CMI(O)						
		LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A06	Kingman Road Landfill	LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A07	Mulligan Road Landfill	LTM						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A08A16	GW Village Landfill & Interceptor T	DES						
		CMI(C)						
		CMI(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A09	Markham School Landfill & Intercept	DES						
		CMI(C)						
		CMI(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A11	POE Road Landfill	DES						
		CMI(C)						
		CMI(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A12	Accotink Landfill	DES						
		CMI(C)						
		CMI(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A14	DRMO Salvage Storage Area	RFI/CMS						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A24	Former DPDO Storage Area- PCB Spill	RFI/CMS						
		DES						
		CMI(C)						
		CMI(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC-A26	Suspected Sanitary Landfill B	LTM						

FORT BELVOIR CR Schedule

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
CC-A29	Mason Pit Debris Fill	RFI/CMS	■	■				
		CMI(C)		■	■			
		CMI(O)			■	■	■	■
		LTM						■
CC-AOPC-20 BNA	Contaminated Soil and Groundwater	RFI/CMS	■	■				
CC-E01	Bldg 3232 Waste POL & Empty Drum Storage	RFI/CMS	■	■				
CC-E14	Building 1939 Waste POL Storage Area	LTM	■	■	■	■	■	■
CC-L09	Former Coal Storage Area In-Ground Concr	CMI(C)	■					
CC-L45	Sewage Treatment Plant #1	RFI/CMS	■	■				
		CMI(C)	■	■	■			
		CMI(O)			■	■	■	■
CC-MP1	Former POL Area at Accotink Landfil	CAP	■					
CC-MP10	21st Street Luquid Dump Site	RFI/CMS	■	■				
		CMI(C)		■	■			
		CMI(O)			■	■	■	■
CC-MP2	1124 PCE detections	RFI/CMS	■					
		CMI(C)		■				
		CMI(O)			■	■	■	■
CC-MP5	Recycle Center Contaminated Soil	RFI/CMS	■	■	■			
CC-MP9	Old Dump	RFI/CMS	■	■	■			
CC-MPS2009	PSAs 2009, 2033, and 2034	RI/FS	■	■				
CC-N23	Post Dump	LTM	■	■	■	■	■	■
CCBLDG1124	Bldg 1124 - Vehicle Fueling Facility	LTM	■					
CCBLDG2209	Bldg 2209/2217- Former Military Barracks	LTM	■					
CCBLDG3161	Bg 3161- Davison Army Airfield Fuel Yard	IMP(O)	■					
		LTM	■					

FORT BELVOIR CR Schedule

SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
CCPBA@Belvoir	PBA@IR and CR Belvoir	CMI(C)						
		CMI(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19+**
CC_E10	Building 328 Waste POL Storage Area	RFI/CMS						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 200709

Restoration Advisory Board (RAB): No

Reason Not Established: The community has expressed no sufficient, sustained interest in a RAB.

Community Interest Solicited on: 201303

Efforts Taken to Determine Interest

There has been no interest from the public in forming a RAB. The latest notice soliciting for community interest was placed in the Washington Post, Mount Vernon Gazette and Springfield Connection newspaper on March 21, 2013. The notice was also published on the Fort Belvoir webpage and Fort Belvoir Eagle.

Results

N/A

Follow-up Procedures

N/A

Additional Community Involvement Information

FTBL's community involvement plan was finalized in September, 2007, and is currently under revision. In addition to the RAB solicitation, FTBL provides notices of availability as required under the appropriate cleanup program (CERCLA, RCRA).

Administrative Record is located at

US Army Garrison Fort Belvoir
Directorate of Public Works,
Room 200
9430 Jackson Loop
Fort Belvoir, VA 22060-5116

Information Repository is located at

TBD

Current Technical Assistance for Public Participation (TAPP): N/A

TAPP Title: N/A

Potential TAPP: N/A